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## The Salaries of Veterinary Inspectors.

Not long ago the Yorkshire V.M.S. discussed this subject, with no very visible result beyond the passing of a resolution which was forwarded to the R.C.V.S. The question is a difficult one, and was made more so by the inclusion of other allied subjects, such as the fees obtained in ordinary private practice, especially in contracting for studs of horses. Regarding the latter in particular, it must be admitted that a great part of the present unsatisfactory state of affairs is due to the deplorable lack of combination amongst veterinary surgeons themselves, and will remain while that exists. The salaries of veterinary sanitarians stand upon a different footing to the fees of private practitioners, and upon the whole offer more hope of improvement.

Time is required before the value of an innovation can be appreciated, and the official sanitary veterinary surgeon is certainly an innovation to this country. Very many local authorities have not yet recognised any necessity for a whole-time veterinary official. Most of the remainder have only done so very recently. It is not surprising, therefore, that many of the posts which are now opening to us should open at an inadequate remuneration. We know that the public enlightenment in all matters pertaining to preventive medicine is progressing with wonderful rapidity, and it will not be long before the expert sanitary veterinarian is generally and popularly recognised as indispensable. When that time comes, he will be remunerated as public officials usually are—that is, his income will exceed the average one derived from the practice of his profession, but will not approach that enjoyed by a few really successful practitioners. That, in fact, is the position of the M.O.H., who is now firmly established, but whose salary cannot be compared with that of a successful physician or surgeon.

As far as we are concerned, the present position is that many local authorities expect the whole time of a professional man who has specialised in one branch of his profession at a salary comparable to that of a skilled artisan; and it is not likely that any immediate action on our part could induce them to do otherwise. But most of these local authorities would have scouted the idea of a veterinary official at all a decade or two ago; and, as they have advanced so far, they will advance farther. The veterinary public service is still only in the inceptive stage in this country, and, when it has become established as a national institution, its adequate remuneration will follow naturally.

## ABSTRACTS FROM FOREIGN JOURNALS.

### Epilepsy in a Cow.

Epilepsy is rarely seen in bovines, and the following case, reported by Ciurea, of Piatra Neamtz, Roumania, is therefore of interest. The subject was an eight-year-old cow, moderately fat, which was presented to the author at the local abattoir for inspection prior to slaughter.

Having made a brief examination of the animal and observed nothing abnormal, Ciurea gave the authorisation for her slaughter. He was preparing to continue his further inspections, when the cow suddenly began to tremble, fell upon her side, and became convulsed. She lay upon the ground for about a minute, showing clonic contractions of the muscles of the face, neck, and limbs, while the eyeball moved spasmodically in different direction. She then rose suddenly, but, when up, maintained her equilibrium with difficulty, being still completely under the influence of the attack. The contractions were limited to the muscles of the face and neck, the head was twisted round the cervical axis, the mouth was partly open, and the extremity of the tongue protruded through the left commissure. The masseter muscles contracted spasmodically, with an accompanying abundant foamy salivation.

After this attack, the cow appeared to come to herself a little, but was exceedingly enfeebled. The respirations were accelerated, and general muscular trembling was evident, especially in the muscles of the back. She moved unwillingly, and was brought with difficulty into an enclosure, where, to his great surprise, Ciurea found that she was quite unable to see. She ran against the fence of the enclosure whenever she moved, like an amaurotic animal and, as she was restless, she was tethered for safety. A few minutes later she became calmer, and her vision began to return, but she remained feeble and dull.

Ciurea postponed slaughter till the next day, in order to see whether the attack would recur. This did not happen, and the general condition of the animal the next day left nothing to be desired. Moreover, Ciurea learned that the cow had been bred by a neighbouring farmer, whose property she had remained until sold to the butcher who offered her for examination. She had produced six good calves, and nothing abnormal had been noticed in either mother or calves.

The cow was therefore slaughtered the day after the attack, and a minute naked eye autopsy by Ciurea failed to reveal any abnormality. The cow

was two months pregnant. Ciurea calls attention to the fact that not one parasite was discovered in the organs.—*Arhiva Veterinara.*

### Rupture of the Bladder.

Kinsky (*Zeitschrift für Veterinarkunde*) records the case of a horse which refused his morning meal and was spiritless. Further striking symptoms were muscular tremors of the posterior extremities straddling gait, weak intermittent pulse, marked lachrymation, anxious looking round at the abdomen, frequent unsuccessful attempts to urinate, restless movements to and fro, and slight sweating. The temperature verged upon 103 F.

Rectal examination showed that the bladder was distended with urine to its utmost capacity. Catheterisation was therefore attempted, and, after a considerable quantity of smegma had been removed, the catheter was passed without difficulty round the ischial arch, and then encountered an obstruction.

Urethrotomy was then decided upon, and performed upon the standing horse. During the operation the horse threw himself violently down, but then remained lying quietly upon the straw. After the operation was completed, it was found possible by the exercise of a moderate amount of force to introduce a mare's catheter into the bladder, but only about three-quarters of a litre (= about 1 pint, 5oz.) of urine flowed away, and this was bloody. The horse died the next day.

At the autopsy, a rent rather exceeding 1½ inches long was found in the inferior wall of the bladder, the rupture having almost certainly been caused by the horse throwing himself down. The urethral obstruction proved to be a stricture of rather more than an inch in length. The urethral wall at the stricture was of almost cartilaginous hardness, and the mucous membrane lay in thick longitudinal folds.—(*Berliner Tierarztliche Wochenschrift.*)

### The Development of the Ascaris of the Horse.

Albrecht (*Zeitschrift für Veterinärkunde*) reports his observations with regard to the diagnosis of *Ascaris megalocephala* of the horse, and to its not yet certainly elucidated developmental history.

When a horse passes no worms in the dung, and yet harbours sexually mature ascarides, their presence in the intestine can be ascertained with ease and certainty by the demonstration of the characteristic ova in the dung. A small quantity of dung is mixed with a few drops of water on a slide, and examined with a magnification of from 100 to 150. The ova of *A. megalocephala* are round in shape, have an average diameter of 90 micro-millimetres, and are enclosed by three envelopes.

According to Albrecht's experience, ova which are kept in a moist chamber or in dung-balls at the temperature of the room require 24 to 30 days for the complete development of the embryo. If the ova are placed in an incubator and kept at 37 C. the development of embryos is observed after from three to four days.

In his researches, Albrecht found younger horses (up to six years old) very much more frequently affected with ascarides than older animals. Of 44 Army horses, mostly remounts, the dung of 18 contained the characteristic ova. Among horses in civil life, also, Albrecht found ascarides very often; among foals, their presence can be counted upon with tolerable certainty.

It is to be inferred that transmission of the parasites takes place directly (without an intermediary host) by the horses picking up the ova contained in the dung. As regards the time occupied by the ascaris in growing to sexual maturity, Albrecht agrees with Hutyra and Marek, who fix it at from ten to twelve weeks.

When one horse is seen to be affected with ascarides, the other horses in the stable should be carefully examined, especially the near neighbours of the affected horse. This measure is especially important to horse breeders, for ascarides are certainly more harmful to foals than to older animals.

Albrecht places tartar emetic in the front rank of the drugs employed againt ascarides.—*Berliner Tier. Woch.*

W. R. C.

## NINTH INTERNATIONAL VETERINARY CONGRESS, AT THE HAGUE, SEPTEMBER, 1909

### The Construction of Stables in Relation to the Prophylaxis of Diseases of Animals—especially Tuberculosis—and also on the Hygiene of Milk.

Report by Mr. J. S. Lloyd, F.R.C.V.S., D.V.S.M.Vict., Chief Veterinary Inspector for the City of Sheffield.

The subject matter of my report can be conveniently dealt with under four heads—construction of stables, prophylaxis of diseases of animals, tuberculosis, hygiene of milk.

Under the above headings I will therefore proceed to do so, but, in order to keep my paper within the size prescribed by the Executive Committee of the Congress, I shall narrow the subject matter down so that stables shall only include cowsheds, animals shall only mean bovines, diseases shall be those diseases communicable from cattle to human beings or from human beings to human beings by means of milk infection or contamination.

### Construction of Cowsheds.

In these days of enlightened sanitation, it is comparatively easy when constructing new cowsheds to have them made to prescribed regulations as to light, ventilation, cubic and ground floor space, arrangement and construction of floor, drainage and such like necessary matters, that the resultant buildings are in every sense of the word sanitary. It is when dealing with insanitary buildings in order to bring them up to modern sanitary requirements that most trouble is met with, and where the veterinary officer, sanitary expert, architect and builder have to be ingenious, practical and experienced, so as to make a good job out of a bad one. In constructing new cowsheds, one is often able to choose a site. The latter should be on a high level to facilitate drainage, and in a sheltered spot having a southern aspect in order to have warmth. The ground should also have a dry subsoil. In towns, however, cowsheds often have to be built in unfavourable situations, and, in such cases the best must be made of the site provided. When called upon to

reconstruct old cowsheds in such congested districts, it is often almost, if not quite impossible to comply with present day sanitary requirements, and it is then questionable whether the keeping of cows in such places should not be discontinued altogether.

Indeed, some authorities on hygiene question the expediency of keeping cows in city cowsheds at all, advocating the exclusive use of country districts for such purposes. From the health aspect of the cows, country housing has much to recommend it, but there are many reasons why cows producing milk for human consumption in its fresh and natural state should be kept conveniently near to the people who consume their milk. These reasons will be referred to when discussing the hygiene of milk, and need not be given here. In most of the large towns in Britain, the greater part of these old cowsheds in very congested districts have either been removed, the site cleared and new cowsheds built, or the keeping of cows has been discontinued. In the latter case it has often been found convenient to continue the old dairy premises as a centre for the sale of milk, whilst the cows supplying it have been removed to new and sanitary cowsheds built in the suburbs or country districts around.

The materials used for the construction of cowsheds depend to a very large extent upon the part of the country in which the buildings are situated. In many parts bricks are cheap and are largely used; in others stone is plentiful and stone-built cowsheds are common. Both brick and stone as materials for building cowsheds are far preferable to wood and iron, neither of the former being so liable to be affected by atmospheric conditions and they are more durable, whilst of the latter, wood is insanitary because of its absorbent qualities, and it is found that cowsheds built of either are too hot in the summer and too cold in the winter. In these days of concrete and ferro-concrete, it is possible—perhaps probable—that cowsheds may come to be largely built of this material. Where stone is unsuitable, although plentiful, and where the carriage of bricks by road, rail or canal is prohibitive, experiment and experience may prove that buildings of concrete blocks or ferro-concrete can be put up as cheaply or cheaper than when using brick or stone. For the roof nothing is better than grey or blue slates or earthenware tiles, which may be underdrawn with hair mortar or ceiled with stained match boarding. As a lining for the internal walls, cement is largely used. It has the advantage of being impervious, can be scraped and washed without disintegration, and can, if desired, be artificially coloured whilst in the making to any tint required. Where expense is no object, the interior of the walls can be built of glazed bricks, white, blue or brown in colour, and certainly both in appearance and cleanliness they apparently justify the extra cost involved. For feeding troughs, glazed earthenware set in cement is much to be preferred to troughs of wood, brick or stone. In some cases the troughs are made wholly of cement, but the latter have not the clean and smart appearance of glazed earthenware. For the stall divisions and hay racks wood is generally used. The chief objection to wood is its absorbent quality, but this can be remedied to a considerable extent by using oak or other hard wood in preference to soft deal or other cheap varieties. From a purely sanitary point of view, stall divisions of slate, stone or concrete are to be preferred. The use of iron for the internal structure of cowsheds is usually objected to on the ground of the incessant noise produced.

To ensure cleanliness of the cows and consequently of the milk, the proper structure and arrangement of the floor is essential, whilst the amount of floor-space per cow has to receive careful consideration. A large floor-space is often recommended by medical men and others who have no practical knowledge. Experience, however, shows that to keep cows clean it is absolutely necessary that the actual standing and lying space allowed for each cow must be curtailed, and even graduated according to the sizes of the cows kept. For single stalls four feet per cow including the stall divisions is ample. Unless the cows are very large or are kept for breeding purposes (when heavy in calf cows require more space) three feet nine inches will generally be found sufficient. For double stalls, seven feet including stall divisions will be ample for large cows, six feet six inches being sufficient for small ones. The wider the stalls, the more dirty and dangerous they become—dirty because the cows can move about and soil the floor surface, dangerous because the cows can turn across the stall, even into the manger or feeding trough, where they often fall and are suffocated by hanging. But if the width of the stalls requires consideration, the length of the stalls is much more important. Excluding the feeding trough, a length of four feet nine inches up to five feet six inches is ample when cows are only kept for milking purposes, and where cleanliness is a most essential detail. Stalls are often as long as six feet six inches, and then people wonder why the cows are dirty. This is easily explained. The longer the stall, the more likely is the dung of the cow to fall on the floor where the cow lies, and especially is this liable to happen when the cow is able to stand well forward with her head in the feeding passage, and, possibly her feet in the feeding trough. To prevent the latter occurrence, hayracks should be placed in front of the cows on a level with their heads when standing, or if a feeding passage is provided and hayracks are not used, iron or wood rails should run along the front, high enough to prevent the cows getting their heads into the feeding passage, and close enough to prevent them getting their heads through, and possibly getting caught by the horns. In order to accommodate cows of different lengths, it is necessary that the depth of the stalls should be graduated. This is easily and almost invisibly carried out by a simple arrangement of the dung channel and milking passage behind the cows. The latter is made about six or nine inches wider at one end of the cowshed than at the other, the dung channel being the same width the whole length of the shed, but the stalls being six or nine inches longer at the narrow end of the passage than at the other. By this method it is easy for the cowkeeper to put the long cows in the long stalls, graduating the cows down to the shorter stalls. Another arrangement to meet the same difficulty is to have groups of stalls made different lengths, but this necessitates the presence of objectionable angles in the heel-stones from whence it is difficult to dislodge the manure.

The arrangement of the cowshed floor from a sanitary standpoint is important. It is also important on the score of convenience in feeding, removal of manure and accommodating of cows. Where the number of cows is limited and plenty of ground space is available, single cowsheds are mostly in use, but where it is desired to keep as many cows as the ground space available will allow, it is usual to have double cowsheds—that is, cowsheds accommodating two rows of cows. In such cases, it is always desirable to have a feeding passage along two sides of the shed both for convenience of feeding and for better ventilation. Up the middle of the shed is the milking passage, and immediately on either side are the urine and dung channels. Between the latter and the feeding passage are the stalls for the cows. A good width of cowshed for a single row of cows is 18 feet divided as follows:—four feet for the feeding passage and headstone or partition dividing the feeding passage from the stalls, two feet for the feeding trough including four to six inches between the feeding trough and the headstone. This space should be filled up level with the top of the feeding trough with concrete, and allows for comfortable feeding by cows having horns pointing straight to the front. If this space is not provided, such cows often have to feed with their heads sideways in the

feeding trough. The length of stall from the feeding trough to the drop of the heelstone should not be less than four feet nine inches or more than five feet six inches according to the size of the cows kept. A graduated length as already pointed out is the best arrangement. The drop from the bed of the stall or the heelstone should not be less than six inches. The writer formerly advocated not less than four inches, but he is now satisfied by experience that the latter amount is not sufficient. The width of the dung channel should be about two feet, and the floor level should fall slightly from the cows towards the urine channel. The latter should drop about one inch below the dung channel and should be about twelve inches wide. It should have a longitudinal fall of about 1 in 72 in order to convey the urine out of the cowshed by emptying over a trapped gulley leading to a drain and situated outside the cowshed. The milking passage—that is, the passage behind the cows—remains to be taken from the original width of 18 feet, and will be four feet three inches wide at the end of the shed where the stalls are short, and three feet six inches at the other end.

Various other arrangements of cowshed floors are met with; often the urine channel is not provided. If the dung channel is extra wide—not less than two feet six inches—or where some absorbent such as peatmoss litter or sawdust is used to soak up the urine, the urine channel is not an absolute necessity. Where it is necessary for the urine to quickly flow away, it is an advantage, and the wider it is up to a foot, the less likely it is to be blocked up by dung or bedding, and the easier is it cleaned by broom or shovel. In some cowsheds, only one narrow channel is placed behind the cows for both dung and urine. This is a very insanitary arrangement, as such a channel soon gets filled up with dung, the urine is blocked up in pools, the cows when lying down have their haunches in the manure and their tails in the pools of urine. It is almost needless to add that such cows are always in a filthy state. The only narrow channel permissible is one that is not only narrow but deep. One such can be seen at York—about 15 inches wide and the same depth, with the stall floors extremely short. The first glance would condemn such a floor as dangerous to the cows, but in practice it is found that this is not so. The cows soon learn to step over the channel, and the arrangement is certainly conducive to cleanliness when the bottom of the channel is lined with such an absorbent as ground peatmoss litter. The latter absorbs the urine and adds materially to the fertilizing value of the manure.

Another arrangement of the dung channel can be seen in Lancashire. Here there is one channel for dung and urine, but it is about 3½ or 4 feet wide and slopes sharply away from the cows so that the urine quickly flows to the side of the channel farthest from the cows, and thence out of the cowshed to the gully. The apparent fault of such a channel is the danger of cows slipping and falling owing to the rapid slope backwards of the channel floor. In any arrangement of cowshed floors, three things must be borne in mind if the cows are to be kept clean.

1. There must not be an excessive floor space per cow for actual standing or lying—16 to 19 square feet is sufficient.

2. The dung channel must be wide enough to contain the dung from the cows for a period of at least ten hours, and deep enough to prevent the cows lying in the dung during that time.

3. Adequate provision must be made for a quick removal of the urine either by a rapid flow or the use of some absorbent material in the channel.

In the case of double cowsheds, the same arrangement of floor holds good in duplicate, but with only one centre milking passage. The latter need not be more than four or five feet wide where suitable dung and urine channels are provided. Where narrow, deep channels are in use, the milking passage should be correspondingly wider. Narrow, shallow dung channels should be unhesitatingly condemned as an insanitary arrangement. Another arrangement of the double cowshed is to put cows' heads to one central feeding passage. This allows a double cowshed to be built some feet narrower, but such cowsheds are not well adapted for good ventilation, and, consequently, are a distinct menace to the good health of the cows kept therein. Further, the infective matter coughed up by cows suffering from tubercular disease of the respiratory passages is very liable to be carried across to the cows opposite, thus adding a ready means of conveying the infection from diseased to healthy animals. When feeding passages are provided, a good double cowshed will require to be not less than 32 feet wide. If the cows are tied close to the walls, a double shed can be built some 6 or 8 feet narrower, but the latter arrangement cannot be recommended on hygienic principles.

The construction of cowshed floors is also a matter of some moment. The old cobble or brick floors set in sand or cinders are entirely unsuited to the present day requirements. In order that cowsheds may be washed down and kept sweet and clean, impervious floors are a necessity, and for making them nothing is equal to concrete made with good cement. The objections to concrete raised by cowkeepers are that such floors are hard and damage the knees of the cows when lying down, and that they are slippery. Neither of these objections require serious consideration, because the first statement is not borne out by actual facts, whilst the second has been exaggerated, and the means of obviating it are practically in the hands of the cowkeepers themselves. It is not necessrry that concrete floors should be floated smooth with cement as they are so often done, they answer their purpose just as well when left with a slightly roughened or grooved surface. Further, it is those concrete floors which have become greasy owing to coatings of dirt which are most slippery: frequent washing removes the greasy and slippery surface. Even smooth floors can be made safe by just a sprinkling of sand on the passages whilst the cows are walking in or out of the sheds. Very serviceable floors can be made out of blue bricks well set on edge in cement: also of well cut and well jointed flag stones set in cement. Special care in joining for the dung and urine channels is necessary if flag stone floors are to be successful, care being taken that in each instance the flagstones of lower levels are overlapped at the edges by those of higher levels. Thus, the flagstones forming the urine channel should be everlapped on the one side by the stones forming the milking passage, and on the other side by the stones forming the dung channel, the latter in turn being overlapped by the heel-stones or latter part of the stall floor. In this way the flagstones forming the channels regularly kept in a wet condition are, to a large extent, kept tight in their places by the stones above them. The same arrangement of overlapping should hold good when bricks are used for the channels, and in all cases the joints ought to be made secure with cement. From every standpoint, however, it is desirable that the channels should always be made of concrete. The latter scores on the points of cheapness, better drainage and better sanitation generally. One of the chief advantages of concrete floors and cement dados round the interior of the walls is often overlooked, and that is their opposition to the presence of vermin, rats, mice, etc. The latter cannot penetrate such walls or floors, and, if gaining admittance to the sheds by doors or windows soon become an easy prey to the cat or vermin killer. A common construction of the stall floors in many parts of the country is to to have flat flagstones (heelstones) under the heels of the cows, and the rest of the stall floor constructed of the bare earth, road scrapings, clay,

chalk, wood or bricks. All of these have important drawbacks, and certainly with the exception of bricks, ought to be condemned. Floors of earth, road scrapings, clay, and chalk are continually in bad repair, are consequently irregular on their surface and dusty, and, like wood floors, are not impervious to moisture, and so incapable of being properly cleansed and disinfected. The only floor for cowsheds that answers all requirements is concrete, made of best materials, well constructed and properly arranged. In arranging the level of a cowshed floor, an important point to be remembered is the facility for good drainage, giving sufficient fall to rapidly discharge all liquids from the floor on to a properly trapped gully situated outside the cowshed. In order to get a good fall it is generally advisable to have a step about 6 inches high leading from the outside to the inside of the shed. By having the cowshed floor that much higher than the level of the yard surface outside, a good fall for liquid drainage is assured and the outlet from the urine channel through the wall is sufficiently high to empty over a gully situated little, if any, below the outside ground surface—the gully top thus being always exposed and capable of easy cleansing and access. When the gully has to be sunk into the ground in order to give a fall for drainage, either the gully top is continually getting covered and choked by dirt, or the top has to be covered in to prevent. In the latter case easy access for cleansing is wanting, and, owing to confinement, bad smells abound.

In connection with every cowshed premises, a proper system of drainage is a necessity to keep the premises in a sanitary state, and not only should the liquid discharges from the cowshed be carried off, but in order to have dry yards (surroundings) a system of surface drainage, eaves—troughing and spouting, etc., is an absolute necessity. Where public sewers are in existence, as in towns, the disposal of cowshed sewage is an easy matter. In other districts liquid manure tanks or cesspools have to be made. In such cases it is always advisable to have yard and roof water conveyed by drains separate from those of the cowshed, otherwise the emptying of tanks or cesspools becomes a much more frequent and laborious matter. The yard surface ought always to be paved and kept in good repair and clean. Too often farmyards are in a continual state of filth, and cows wading through this carry considerable quantities into the cowsheds with their feet, thus making the passages and standings dirtier than they would otherwise be. A properly constructed manure pit in connection with town cowsheds cannot be done without. Such pits should not be too large because the oftener they are emptied the better. They are best constructed of blue bricks set in cement, having concrete floors and covered with a slated roof supported on brick pillars. If the situation is very confined, a ventilating shaft in the roof does much in helping to carry away objectionable smells. The situation of the manure pit is a matter of importance; if possible it ought not to adjoin the cowshed, and should most certainly not communicate with it by ventilators or other openings. In country districts the manure can often be taken from the cowshed to a distant yard or even to the fields. Often, however, it is simply thrown from the cowshed on to the adjoining yard—very objectionable practice unless the dimensions of the manure heap are confined by means of surrounding walls, and the yard surface between the manure heap and the cowshed is kept clean by frequent brushing. If at all practicable, the manure pit or heap should always be some distance from the cowshed. The proximity of manure to milk ensures the latter absorbing bad smells in addition to the liability of contamination by flies, particles of dust, etc.

The lighting of cowsheds next demands consideration. Formerly, cattle were kept in dark sheds, the owners considering that the cows were quieter and gave more milk than if kept in well-lit houses. The old saying "Darkness means Dirt," however, applies here with some force, and it is now well recognised that in order that dirt should be removed and the premises kept clean, there must be plenty of light in the shed so that dirt may be seen. The method of lighting, moreover, is important. Windows in the walls of the shed are better than lights in the roof. When the latter are absolutely unavoidable, northern lights are greatly to be preferred to those in a roof facing the South—and the sun. The rays of the latter, focussed by the glass on to the backs of the cows are distinctly irritating to the animals, and should be avoided whenever possible. Turrett lights in the roof are preferable to skylights, as the latter often leak and let in the rain, unless made with a good "overlap" and kept in good repair. All windows should be made to open in order to provide additional ventilation in hot weather. Several methods of open windows are met with in practice—sash windows to slide up and down, windows on the pivot principle, and the Sheringham valve method. The latter is certainly the best to avoid draughts. A style of the latter met with in Liverpool is for the bottom half of the window to extend about a foot above the inside of the lower part of the top half. The bottom half of the window opens inwards on hinges at the bottom, and the extra foot or so of glass at the top of this half directs the incoming air in an upward direction and prevents it blowing direct into the cowshed. Another method to be seen in Liverpool is for the bottom half of the window to be fixed glass, the quarter next above to open on the Sheringham valve principle, the top quarter being fitted with perforated zinc instead of glass. By this method part of the window acts as a means of ventilation as well as light at all times, and by opening the second part the means of ventilation can be considerably increased—in fact, more than doubled. The window space per cow ought to be not less than two square feet, and should be so arranged that all parts of the cowshed can be easily seen when the doors are closed.

The commonest methods of ventilation are by means of openings in the walls and roofs communicating with the outside air. The size and number of these openings depend to some extent upon the situation of the cowshed—whether it is in an exposed position or not. As a rule it is preferable to have the openings small in size and large in number, rather than large in size and small in number, and this rule practically holds good in reference to openings or shafts in the roof. As a general guide, it may be stated that openings 9in. by 9in. in the walls are large enough, and usually there is one of these for every two cows. The situation of these openings (inlets) should, if possible, be such as not to cause draughts on to the cows, at the same time they must not be under the care of the attendant or they will generally be closed by means of hay, straw, rags etc. A good plan is to have two iron gratings in the wall, one on the outside and one on the inside with the opening through the wall between. Further to obviate draughts, it is a good plan for the opening to be sloped upwards. In Manchester and Liverpool in some cases, the low outside grating is connected with the high inside grating by means of a flue in the wall. In other cases the opening through the wall consists of a curved drain pipe with the shouldered end opening upwards inside the cowshed. The distance from the floor of the cowshed at which these inlets should be is a matter of diverse opinion.

Theoretically they should be as near the floor as possible. In practice it is found that in the walls behind the cows they should not be less than six feet from the floor, or acute udder complaints will be common. Where feeding passages are provided in front of the cows, the inlet gratings can safely be put close to the floor level. When the cows are tied direct to the wall,

it is best to put the inlets well above their heads, about six or seven feet from the floor.

Where cross ventilation only is provided, the air-grates or openings are best just put below the ceiling or loft floor.

The presence or absence of lofts over cowsheds is another matter about which there is a difference of opinion. Where land is cheap and plentiful, there is not much necessity for lofts, but where land is dear and scarce, lofts are of a great advantage to cowkeepers for the purpose of storing food and bedding. Sheds open to the roof can be better ventilated, but they are more easily affected by changes in the temperature of the atmosphere; whereas sheds with lofts over are invariably warmer and less liable to such changes. The presence or absence of lofts has much to do with the methods of outlet ventilation. When lofts are present, they should be cut off from the cowshed below by air-tight floors. The latter are usually made of grooved and tongued boards, the under surface being stained and varnished; or ceiled with laths and plaster. The latter cannot be recommended as the plaster becomes affected by the heat of the cowshed, by the condensation of moisture, and the action of ammonia gas, and consequently is continually in a bad state of repair. The openings in the loft floor necessary for putting down hay or fodder and for access ought to be covered by well fitting doors in order to prevent the food in the loft being affected by the moisture and gases from the cowshed. When lofts are present over cowsheds, in order to get good outlet ventilation it is necessary to have air shafts carried through the loft—opening at the bottom end in the cowshed and at the top of the roof terminating in well constructed louvres. The latter prevent storms of rain or snow blowing in, and to a considerable extent also prevent down-draught. Often, however, in order to prevent the latter, the air shafts terminate in various cowls, torpedo ventilators etc. The use of these is really a question of cost. If small shafts—say one foot square for each four cows—are provided, and so placed as not to be directly over the backs of any particular cows, it is seldom that anything more is required in order to prevent down-draughts than a simple louvres outlet at the top of the roof. Where the cowshed is open to the roof, similar small louvred outlets without the shafts at the highest parts of the roof are all that is required, although in very exposed situations sufficient outlet ventilation is provided by means of using raised or ventilating ridge tiles, and particularly is this the case when the under surface of the slated or tiled roof is unceiled. In the latter cases, there is considerable ingress and egree of air through the joints in the roofing materials.

A matter closely connected with ventilation is that of cubic space. Considerable controversy continues to take place over this subject between owners and occupiers of cowsheds on the one hand, and sanitary authorities on the other. All recognise that a large cubic area in a cowshed requires a less frequent change of air to keep it pure and wholesome; on the other hand it cannot be denied that a large cubic area is more liable to be affected by sudden changes of atmospheric temperature and particularly by falls of the thermometer, when considerable diminution in both quantity and quality of milk given by the cows is stated to result. Numerous experiments have been carried out to support and refute the latter statement, and, although recent experiments in Scotland have conclusively shown that cows kept in permanently cool (not less than 49 F.) sheds give more milk than cows in warm (over 60 F.) sheds, they do not prove that sudden falls in the temperature of cowsheds do not materially (although probably temporarily) lower the milk yields of the cows kept there. The experience of reliable men proves that this is so.

Where the ventilation is adequate—sufficient to keep the air in a cowshed pure and sweet—it is probable that a cubic space of 600 to 800 cubic feet per cow according to the size of the cows kept will be found sufficient. Such a cubic space does not require that the cowshed should be extra large or high, and it will be found in practice that such cowsheds are more easily kept at a uniform temperature than are cowsheds where the cubic space per cow is much more. A cowshed 18 feet wide, 10 feet high, and allowing 3ft. 9in. lineal per cow gives just under 700 cubic feet to each cow, and these measurements may be taken as an average size for ordinary cows. The greatest trouble sanitary officers have to contend with is that of preventing cowkeepers from interfering with the ventilation by stuffing up the ventilators with hay, straw, rag etc. Where, however, the ventilating arrangements have been carried out by practical men, after taking into consideration the position of the cowshed, the surroundings, exposure, etc., it is generally found that cowkeepers of ordinary intelligence agree that their cows are healthier in well ventilated cowsheds than in stuffy ones. It is the ignorant cowkeepers who give trouble, and the only way to dispel their ignorance and remove their opposition to sanitary principles is by means of the law, and in such cases it is even to the benefit of the cowkeepers as well as of the cows that the law should be enforced.

*(To be concluded.)*

## THE CENTRAL VETERINARY SOCIETY.

The annual general meeting of the Society was held at 10 Red Lion Square, W.C., on Thursday, Oct. 7, Prof. F. Hobday occupying the chair; the following Fellows signed the attendance book: Messrs. R. A. Philp, Percy W. Woolston, P. W. Dayer-Smith, Capt. R. C. Moore, R. J. Foreman, Ainsworth Wilson, Sydney H. Slocock, W. S. Mulvey, Wm. Hunting, Prof. G. H. Wooldridge, R. F. Wall, E. Lionel Stroud, W. Roger Clarke, W. Perryman, A. Rogerson, James Rowe, Leonard S. Balls, and Hugh A. MacCormack, Hon. Sec., and as visitor Mr. J. Martin Rice, Canada.

On the proposition of Mr. R. J. Foreman, seconded by Mr. W. S. Mulvey, the minutes of the last annual meeting were taken as read and confirmed.

### Correspondence.

Letters regretting inability to be present were announced from Messrs. W. Shipley, Charles Roberts, J. Willett, A. M. Foster, and A. L. Butters.

Letters resigning Fellowship of the Society were received from Messrs. C. W. Howard, Dorking; A. Stainton, Eastbourne; W. A. Stainton, J. C. Paton, and W. Wadsworth, London; P. Woodruff Hill, St. Leonards-on-Sea.

A letter was read from Mrs. Wragg conveying her thanks to the Society for its sympathetic response to the testimonial on behalf of her late husband.

Letters were also read from the Trustees of the Society, Messrs. Woodger and Butters, assenting to retain office, and Mr. Rowe resigning his Trusteeship.

The President thought it was rather a wholesale list of resignations, but many of those resigning had been unable to get to the meetings and it had been only from loyalty to the Society that they had continued their subscriptions for so long.

On the proposition of Prof. Wooldridge, seconded by Mr. E. L. Stroud, the resignations were accepted with regret.

Mr. John W. McIntosh, M.R.C.V.S., of Camberwell, was unanimously elected a Fellow of the Society.

### Election of Honorary Fellows.

The Council recommended for election as Honorary Fellows Mr. A. L. Butters, of London, and Mr. A. Theiler, C.M.G., of Pretoria.

The President said that Mr. Butters had always been a very staunch supporter and had done loyal duty in all the offices of the Society, having acted as President, Secretary, Treasurer, and Trustee. No man had the welfare of the Central more at heart and no man was more deserving of the honour. Dr. Theiler was well known to everybody as a man who had very materially helped to make veterinary history in South Africa: his name was of world wide reputation as an earnest worker in the cause of veterinary science. Both names were too well respected by the members of this Society to need further praise or comment.

Mr. E. L. Stroud, as a *confrère* of Mr. Butters for some years, said Mr. Butters had worked for eight or nine years as Treasurer, during which time he put his whole heart and soul into the work of the Society, to the advancement of its interests, and had done all he possibly could to further its welfare. He thought the Society should make some little recognition for such services by electing Mr. Butters an Honorary Fellow. With regard to Dr. Theiler, he only knew him by repute, but he was certain he would be an honour to the Society.

Prof. Wooldrige supported the recommendation. After what Mr. Stroud had said there was no need for him to speak of Mr. Butters' valuable services. Dr. Theiler had been instrumental in doing a large amount of work for the veterinary profession and for agriculture in general in South Africa, and the Royal College of Veterinary Surgeons had elected him as an Honorary Associate of the College. Dr. Theiler was at present in Europe and would be in England very shortly, and it was quite probable that the Society would have an opportunity of welcoming him in person at the next meeting. Dr. Theiler was a Doctor of Veterinary Science of Bale.

On the ballot being taken, Mr. Butters and Dr. Theiler were unanimously elected Honorary Fellows.

### Alteration in Name of the Society.

Prof. Wooldridge said that at the Council meeting a proposition was brought forward for the deletion of the word "Medical" from the Society's name and he believed it was done in order to make the name of the Society more correct. As a matter of fact the word "Medical" was redundant, being included in the term "Veterinary." In the case of the National Society the word did not appear, and he thought the Society might fall into line with the National. The correct description of the Society was "The Central Veterinary Society" and he proposed that the alteration should be made.

Mr. Mulvey seconded the motion. The diploma stated that the members were licensed to practise the science and art of veterinary medicine and surgery, and therefore he did not see why the word "medical" was required.

Mr. E. L. Stroud supported the proposition. During the last two or three years the trend of veterinary opinion had been towards the deletion of the word "Medical" in connection with Veterinary Societies. The word "Veterinary" should be sufficient to show the distinction between human and veterinary medicine. He hoped the Society would endorse the action of the Council, although it might be rather hard after thirty-six years to have to alter its title. The Council, however, had discussed the matter very fully and had come to a unanimous decision upon the point.

Mr. Ainsworth Wilson asked how many other Societies retained the word "medical" in their titles.

The Hon. Secretary thought quite half.

Mr. Ainsworth Wilson said that was no reason, of course, why the word "Medical" should not be deleted.

Prof. Wooldridge said if the word "Medical" was retained the word "Surgical" should also be added.

On the proposition being put to the meeting it was carried unanimously.

### Annual Report.

The Hon. Sec. presented the following annual report:—

Mr. President and Gentlemen,—The Council have much pleasure in announcing that the session 1908-1909 has been a very successful one. Eleven Fellows have been elected, eight resigned, and, we are sorry to have to add, three deaths.

The annual meeting was held in October, at which Prof. F. Hobday was unanimously elected President. Ten ordinary, two Council, and one special Council Committee meetings were held, with an average attendance of thirty-two at the ordinary meetings.

In November the annual dinner was held at the Holborn Restaurant and seventy-two attended. Prof. F. Hobday gave his Presidental address at this meeting.

We have to thank the following Fellows for reading papers during the session, and the discussions arising therefrom have been most instructive: Mr. N. Almond "A Contribution to the Study of Follicular Mange in the Dog"; Mr. W. Hunting "Anthrax in the Horse"; Mr. W. R. Davis "Strangles"; Mr. H. Gray "The Diseases of the Eye in Domesticated Animals"; Prof. H. A. Woodruff "The Qualification and Training of the State Veterinary Medical Officer."

Messrs. J. Willett and P. S. Howard delivered their report of the Royal Sanitary Institute Congress they attended at Cardiff; also Messrs. Sidney Villar and E. Lionel Stroud their report of the Royal Institute of Public Health Congress held at Buxton in 1908; your President represented the Society at the International Veterinary Congress held at The Hague in September; Prof. H. A. Woodruff and Mr. Ainsworth Wilson represented the Society at the Public Health Congress, Leeds, in July; and Prof. Macqueen represented the Society at the Conference at Harrogate in July, on the Combination of Veterinary Societies; their respective reports will be given in due course.

Your Council beg to thank the following Fellows for the numerous interesting and instructive specimens exhibited at the meetings: The President, Prof. Wooldridge, Capts. Olver and Pallin, and Messrs. T. C. Garry, Guy Sutton, R. J. Foreman, N. Almond, R. A. Philp, J. B. A. Hare, Ainsworth Wilson, W. Perryman, A. Neish, R. C. Tennant, W. S. Mulvey, J. Willett, and F. Willett.

Resolutions were received from the following Veterinary Societies: Royal Counties, Eastern Counties, and the Scottish Metropolitan.

At the special Council Committee meeting the Bill, then before Parliament, Milk and Dairies and the Tuberculosis Order, 1909, were discussed and resolutions forwarded to the Royal College of Veterinary Surgeons, the different Veterinary Medical Societies, and the veterinary press.

A new feature has been introduced at our meetings, *i.e.* impromptu discussions, and the one held in February was so successful that your Council hope to hold one or more during the coming session.

The balance brought forward and receipts for the current year amount to £168 10s. 5d., and the expenditure £84 11s. 10d., leaving a balance of £83 18s. 7d., which your Council hope you will agree is most satisfactory.

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Mr. Rogerson thought the congratulations of the Society were due to the officers for having conducted

the business in such a satisfactory manner, and he moved the adoption of the report and the balance sheet.

Mr. PERRYMAN seconded the motion, which was carried unanimously.

ELECTION OF OFFICERS.

Mr. W. HUNTING proposed for the office of President Mr. T. S. Price, one of the oldest members of the Society. Mr. Price recently had not been a very regular attendant at the meetings, but he believed there were many reasons for that. At one time Mr. Price regularly attended, and generally spoke, and spoke to the point. Mr. Price was eminently fitted for holding the office of President, having great experience and being a past master in the art of occupying the position of Chairman.

Mr. SLOCOCK seconded the proposition, which was carried unanimously.

The HON. SEC. said Mr. Price had told him that if elected he would be very pleased to take office. Unfortunately, however, he was not able to be present this evening, and therefore Prof. Hobday would be asked to continue to occupy the Chair for the rest of the meeting.

Prof. HOBDAY said that in vacating the Chair as President he wished to thank the Fellows for the cordiality and loyalty with which they had always supported him during his year of office. The work connected with the office of President was light, due to the help and support which was always given by the other officers of the Society, particularly the Hon. Secretary, upon whom most of the duties must necessarily fall. He himself had also been in communication with Mr. Price, who said that if elected he would be pleased to do his best to carry the Society through another year's work.

Mr. ROGERSON proposed a hearty vote of thanks to Prof. Hobday for the manner in which he had conducted the business of the Society during the session. He had personally known Prof. Hobday for a number of years and, in fact, looked upon him rather as a pupil of his.

Prof. WOOLDRIDGE seconded the motion, which was supported by Mr. Slocock and carried with acclamation.

Prof. HOBDAY briefly replied.

A ballot was then taken for the election of Vice-Presidents, Messrs. MacCormack and Perryman being appointed scrutineers of the ballot. The result was the election as Vice-Presidents of Prof. Hobday, Prof. Wooldridge, Mr. Mulvey, and Mr. Rogerson.

For the election of twelve members of Council Messrs. Mulvey and Wooldridge were appointed scrutineers of the ballot, and the election resulted as follows: Messrs. S. H. Slocock, W. Perryman, R. J. Foreman, Ainsworth Wilson, Prof. Macqueen, Sidney Villar, J. Willett, A. L. Butters, J. Rowe, H. King, P. W. D. Smith, and Captain A. Olver.

Mr. AINSWORTH WILSON proposed the re-election of Mr. E. L. Stroud as Honorary Treasurer. Mr. Stroud's services in the past, he said, had been very great, and he thought the Society would be very fortunate in retaining him in office.

Mr. ROGERSON seconded the motion, believing that the Balance Sheet was a very good proof of Mr. Stroud's capabilities as Treasurer.

The resolution was carried unanimously.

Mr. STROUD briefly replied, thanking the Society for the honour done to him. He said that the interest he took in the Society did not diminish with the number of years in which he had acted in an official capacity. It was ten years ago since he succeeded Mr. Mulvey as Honorary Secretary and since then he had filled the offices of Secretary, President, and Treasurer. He pointed out that the smallness of the balance in the present Balance Sheet, £83 18s. 7d., was due to the fact that last year £50 had been placed upon deposit.

Mr. PERRYMAN proposed the re-election of Mr. MacCormack as Honorary Secretary, believing that it was impossible to get a better Secretary.

Mr. FOREMAN seconded the motion, which was carried with acclamation,

The HON. SECRETARY briefly returned thanks.

On the proposition of Mr. Mulvey, seconded by Prof. Wooldridge, Messrs. W. L. Harrison and Mr. P. W. Dayer Smith were re-elected Auditors for the ensuing year.

A hearty vote of thanks was accorded to the Auditors for the manner in which they had carried out their duties.

In the place of Mr. Rowe, who had resigned, Mr. Slocock was unanimously elected a Trustee of the Society, on the proposition of Mr. Rogerson, seconded by Mr. Foreman. Mr. Slocock thanked the Society for the honour done him.

It was agreed that the Senior Trustee, Mr. Woodger, should be responsible for the signing of cheques and other documents and that the £50 in Consols should be transferred into his name.

Messrs. Rogerson and Hunting were appointed, together with the President and Officers of the Society, to act as a Dinner Committee.

On the proposition of Prof. Wooldridge, seconded by Mr. P. W. Dayer Smith, a hearty vote of thanks was accorded to Mr. Rowe for his work as Trustee of the Society.

A vote of thanks to the Chairman having been passed, the Society adjourned to Thursday, November 4th, when the Annual Dinner will take place at the Holborn Restaurant.

HUGH A. MACCORMACK, *Hon. Sec.*

## SOUTHERN COUNTIES VETERINARY SOCIETY.

The autumn meeting was held at the George Hotel, Portsmouth, on Thursday, September 30th, when the President, Mr. H. Smith, of Worthing, took the chair, and the others in attendance were Prof. Wooldridge, London; Messrs. J. T. Angwin, Arundel; A. H. Archer, Portsmouth; C. W. W. Brown, Southsea; G. W. Bloxsome, Hove; A. Della Gana, Southampton; G. H. Livesey, Hove; A. Maynard, Bournemouth; C. Pack, Lymington; R. Porch, Bristol; H. Redford, Winchester; J. Alex. Todd, Worthing; and M. E. White, Portsmouth; with Mr. H. Leeney, Southwick, a visitor.

On the proposition of Prof. Wooldridge, seconded by Mr. A. Maynard, the minutes of the last meeting, as published in *The Veterinary Record*, were taken as read and confirmed.

The HON. SEC. announced the receipt of letters or telegrams of regret at inability to attend from Major-General F. Smith, A.V.C., Colonel F. Duck, C.B., Prof. Hobday, and Messrs. R. Burt, R. Barron, E. Whitley Baker, L. Barnard, W. Burt, Junr., W. A. Collins, D. Reid Chalmers, W. Coveney, C. J. Callow, J. B. Dier, H. Gray, W. Hunting, C. W. Howard, H. H. Jeffries, J. B. Martin, P. Perkins, D. Pugh, R. Roberts, C. Roberts, W. Shipley, C. Sheather, S. H. Slocock, W. K. Stuart, C. H. Spurgeon, J. F. and P. J. Simpson, R. A. Thrale, R. F. Wall, A. Wheatley, and D. Wyllie.

The circular letter from the South Durham and North Yorkshire V.M.A. concerning the question of the payment of fees to veterinary surgeons for attendance at race meetings, was read.

Mr. BLOXSOME said this matter was brought forward at the last meeting of the Central, and the idea there was that this was a matter that had better be left to the Executive of the race meetings, and that they as a Society could scarcely dictate what should be the mini-

mum fee. He noticed that surgeons now had to be in attendance as well as veterinary surgeons, and it would be interesting to know what fees they would receive. Speaking generally he should say a guinea a day for out-of-pocket expenses, a luncheon ticket, and free entry to the grounds would be regarded as sufficient remuneration, but others might hold a different opinion.

Mr. MAYNARD thought the question of the fee rested very much with the veterinary surgeon who was appointed, but he must say he thought there was far too much of this honorary work, not only at race meetings but at agricultural and other shows.

Mr. LIVESEY remarked that personally he was not interested in this matter, but he thought it would be waste of time to discuss it. Supposing the Executive of any race meeting were to ask any member to act in this capacity, how could they dictate to that member the fee he should charge for his services.

Mr. PORCH quite agreed. The Jockey Club would not, in his opinion, be influenced one way or the other by any resolution they might pass.

Mr. REDFORD concurred.

On the proposition of Mr. Bloxsome, seconded by Mr. Archer, the communication was then allowed to lay on the table.

The HON. SEC. reported that Messrs. Squair, of Reigate, J. E. Wallis, of Hailsham, and C. F. Hulford, of Haslemere, adhered to their decision to resign their membership, owing to their inability to attend any of the meetings, and on the proposition of Mr. Livesey, seconded by Mr. Archer, the resignations were accepted with regret.

A letter was read from Mrs. Wragg thanking the Society for its kind and sympathetic response to the appeal for the Wragg Memorial Fund. It was to her a most gratifying proof of the very high esteem in which they held her late husband.

A letter was read from the Editor of *The Veterinary News*, who stated that owing to the expense of carrying out their proposal to issue monthly books to the value of one guinea for the best clinical note received during the month, they were reluctantly compelled to cease paying for reports of meetings of Societies, and asking that where one report only was available it might be sent either to *The Veterinary Record* or to themselves, with a request that the publishers in either case would forward the copy on to its contemporary and refrain from publishing the report until the other had had a reasonable time in which to get it put into type.

The HON. SEC. explained that the Society had hitherto arranged for a report to be supplied for *The Veterinary Record*, that being regarded as the official organ of the Society, and that their reporter had himself supplied a report at a reduced fee by private arrangement with *The Veterinary News*, the two reports being always sent off simultaneously.

Mr. PORCH did not think the Society were justified in going to the extra expense of having two reports supplied, but it was eventually decided on the proposition of Mr. Livesey, seconded by Prof. Wooldridge, "That the wishes of the Editor of *The Veterinary News* be complied with as far as possible, so long as the Society is not put to any additional expense, and that the matter be left in the hands of the Secretary, or if he does not care to do it, in the hands of the Executive Committee."

The SECRETARY intimated that he would convey the wishes of the meeting to the Editor of *The Veterinary Record*.

The election of Prof. G. H. Wooldridge, of London, who had been proposed by Mr. Stuart, and seconded by Mr. Angwin as a member at the last meeting, was confirmed, but it was stated that Mr. G. W. Dunlop Martin, of Reigate, who had also been proposed for membership at the June meeting at Worthing, had since withdrawn his name as he was no longer resident in that district.

Mr. HERBERT VERNON DIER, of Mayfield, Sussex, was nominated for election as a member at the next meeting, on the proposition of Mr. Bloxsome, seconded by Prof. Wooldridge.

In the absence of Mr. R. Roberts, the latter's report *re* the Reconstitution of the National Society scheme was deferred to the next meeting.

### THE HAGUE CONGRESS.

Prof. WOOLDRIDGE submitted the following report of the recent International Congress at the Hague to which he had been appointed delegate on behalf of the Society:

Mr. President and gentlemen,—At your request I attended the Ninth International Congress of Veterinary Medicine held at Scheveningen near The Hague, from the 12th to 19th September, inclusive. I subsequently took the opportunity of visiting several institutions for which facilities were provided, and I now offer for your consideration my report.

Most of the British representatives, including your delegate, crossed by the boat from Harwich on the night of Sept. 11, and after a pleasant crossing and short railway journey through characteristic, flat, low-lying country, thickly populated by black and white milch cows, and drained by numerous canals, we arrived at our destination about 8 o'clock on Sunday morning, quite ready for a wash and some breakfast.

On Sunday evening a reception was held by the executive committee so that members of the Congress already arrived might meet, renew old friendships and make fresh acquaintances. It was specially characterized by its informality and apparent good humour on the part of all.

It would, I think, be quite impossible to find buildings more suitable for the purpose of such a congress as this, than the Kurhaus, with its spacious halls and numerous smaller rooms which made excellent offices for the various secretaries and their assistants. Moreover it is part of the same buildings in which the Kurhaus Hotel is situated and where many of us took up our quarters in order to be close at hand for our arduous duties.

On Monday, Sept. 13, the opening ceremony was performed by His Royal Highness the Prince Consort, who came in person attended by several of his cabinet ministers, notably the Minister for Agriculture, and to all of whom the veterinary profession throughout the world owes a debt of deep gratitude for the great honour they have conferred upon us through the medium of this Congress.

The Minister for Agriculture, as President of the Committee of Honour, presided at the opening ceremony, and gave his address in French, pointing out the importance of veterinary science to agriculture in general, and its especially great importance in such an agricultural country as Holland. He pointed out, too, that in such a Congress the means were provided for the beneficial exchange of the result of scientific work. Then speaking in English, His Excellency welcomed the many representatives of the English speaking countries with which he admitted ties of friendship and trade, and thanked us for the support we were giving to the Congress.

His Royal Highness, Prince Henry, then responded to the invitation to declare the Congrsss open, and speaking in French, German, and English, concluded by hoping that the work would meet every success, and declared the Ninth International Veterinary Congress opened.

Prof. Schimmell, of the State Veterinary College at Utrecht, who had been elected President of the Congress

and of the Executive Committee, then gave his address and appointed his officers for the week, including several British representatives, viz., President of Honour of the Congress, Prof. Sir John M'Fadyean, to preside over the fourth general meeting; Vice-President of Honour of the Congress Mr. Stockman to assist at the first general meeting; Prof. Dewar and Dr. Theiler were made Presidents of Section 3 and 5 respectively, and Mr. Trotter, of Glasgow Vice-President of Section 1. Prof. Arloing was elected an Honorary Life-Member of the International Veterinary Congress with much applause.

During his address, Prof. Schimmell gave a *résumé* of previous International Veterinary Congresses, and he pointed out that they owe their origin to the suggestion of an English veterinary surgeon, viz., Prof. John Gamgee, who issued a circular to various veterinary surgeons and professors in Europe inviting them to meet at Hamburg in 1863, during an Agricultural Congress, to discuss questions of general interest to veterinary surgeons and agriculturists, such as the causes and prevention of contagious diseases. About 100 veterinary surgeons responded to the invitation, together with many agriculturists, and so the series commenced. It is remarkable that although brought into being by the instrumentality of an Englishman that the Congress has never yet met in England, and this is due to the apathy of British veterinary surgeons and the British Government, for such a Congress must of necessity have State assistance. I am glad to say that this anomaly is shortly to be remedied, for the British Government has issued an invitation for the next Congress to be held in London, and that invitation has been accepted. Consequently, fifty years after Gamgee started these International Veterinary Congresses, his country will appropriately celebrate the jubilee.

After the President's address, the first official delegates from various countries each made a short speech, and Sir John M'Fadyean made a brief statement on behalf of England in a few happily chosen words. As the speeches progressed, applause was given in direct proportion to their brevity.

In the evening a reception was given at the Royal Palace by his Royal Highness to various delegates, who received commands. Your representative was honoured with a Royal command, but it was somehow delayed in transit and received too late to be obeyed. However, the punishment for not obeying a Royal command in these enlightened days is not so severe as in the "good old days," or your delegate might have been sent home minus his head.

The total number of members of the Congress exceeded 1500, every part of the globe being represented, from China and Japan in the East to America in the West, and from Scandinavia in the North to Australasia in the South. The British representatives numbered over fifty ladies and gentlemen, a marked advance on the number at previous Congresses, but still only a comparatively small proportion of the total. The British Government was represented by Sir John M'Fadyean and Mr. Stockman. Mr. Hedley represented the Department of Agriculture and Technical Education for Ireland, the London, Edinburgh and Dublin Colleges were represented by their respective principals, the remaining Britishers did duty for the various Societies, or attended privately.

The main business of the Congress began on Tuesday morning at 9 o'clock, Dr. Lydtin, of Baden-Baden, in the chair, by a discussion on "Government Efforts against Swine Plague and Swine Fever." His Royal Highness the Prince Consort favoured the proceedings with his presence. Papers were presented on this subject by Dr. Dorset, of Washington, who was first to demonstrate that swine fever was due to a filterable virus, by Prof. Hutyra, Prof. Ostertag, and Mr. Stockman.

The conclusions ultimately agreed upon were that swine fever and swine lung plague are different diseases, and require different methods of control. That swine fever is due to a filterable virus. That in regions where the epidemic is limited in degree, compulsory slaughter is to be recommended. When the disease is extensive other methods should be adopted such as are employed against other contagious diseases. In this connection protective inoculation with serum of hyper-immunised swine diminishes mortality, and that further investigation in this direction should be undertaken by the various Governments. Dr. Dorset spoke very strongly in support of the safety and efficacy of immunisation. Mr. Stockman had not met with quite such favourable results, but his experiments had been conducted on a much smaller scale.

The next subject discussed was "The protection of the Practice of Veterinary Medicine," on which three papers were presented. Such protection was shown to be necessary, not only for the proper working of sanitary medicine, but also to put a stop to injury constantly inflicted to the property and health of man, as well as the indescribable sufferings that empirics daily inflict on animals. The Congress resolved that in those countries where veterinary practice is not adequately protected by law, it is advisable that such legal provision should be introduced in order to elevate the standard and to afford more attraction to the study of veterinary science.

In the afternoon, Dr. Bang, of Copenhagen, in the chair, the first subject discussed was on "The rôle of the Veterinary Surgeon as an Expert in Zootechnical Questions," and four paper were presented. Zootechny is the study of the animal body, including biology, physiology, and hygiene, especially with reference to the production and improvement of animals. Veterinary surgeons have unique opportunities of becoming experts in these matters, and it is their duty to become so in order to give advice concerning the choice and purchase of animals for breeding and other special purposes.

The second subject for the afternoon was "The Conditions necessary to obtain a Doctorate in Veterinary Science." On this subject three papers were submitted and discussed. It was ultimately agreed that the institution of a degree of Doctor of Veterinary Science is desirable. That it should be optional and conferred by such bodies as universities under similar conditions as those required for the Doctorate in other scientific departments, and indicating that the holder possesses special knowledge and has engaged in scientific research.

In the evening a reception was given by the Netherlands Government, represented by the Minister for Agriculture and the Minister for Foreign Affairs.

The proceedings of Wednesday commenced at 9 o'clock. Dr. Hutyra, of Budapest, in the chair. The first subject was on "The Sanitary Control of Milk and the Obligatory Inspection of Meat." Six papers were presented, included an excellent one by Mr. Trotter, of Glasgow, who emphasised the necessity for uniformity of inspection. After discussion, the following conclusions by Dr. Edelmann, of Dresden Veterinary School, were adopted: 1. The principle object of obligatory State inspection of meat is to protect human health from the dangers threatened by the use of meat.

2. Only veterinarians are qualified by their technical knowledge to have charge of meat inspection.

3. It is in the interests of the State in order for the inspection to be depended upon, to give the inspectors a proper social position with corresponding remuneration.

4 Obligatory inspection includes the examination of the animals before and after slaughter. It includes imported meat, even though it may have been inspected in the country it comes from.

5. It is useful to divide meats into good, relatively good, and bad. Bad meats must be disposed of in such

a matter that disease germs cannot be propagated. Relatively good meat should only be sold in the town of slaughter and under police control.

6. Inspection ought to extend to other food of animal origin, game, fowl, fish, crustaceans and molluscs.

7. The great importance of official abattoirs cannot be over-estimated in point of view of general hygiene and efficient inspection. Veterinarians have proved themselves excellent directors of official abattoirs.

8. It is desirable that veterinary students should have more opportunities to become familiarised with the technique of abattoirs and their workings.

In connection with milk, it was concluded that compulsory inspection should be instituted, to include matters of hygienic stabling and feeding, transport of milk, and dairies and places used for the sale of milk; that such duties are essentially veterinary, and that examination for adulteration, skimming, and the use of preservatives is in the province of a specialist in such matters.

The second subject discussed was "The Methods employed in treating Carcases and Meat with the object of rendering them harmless," three papers being presented. It was finally recommended that special apparatuses should be introduced to effectually destroy the diseased materials for food purposes and reduce them to by-products which would be useful, such as artificial manures, etc.

On Thursday morning the chair was taken at 9 o'clock by Prof. Sir John M'Fadyean. The first subject dealt with was: "The prophylaxis and pathology of protozoan diseases," and seven papers were presented by men whose names are very familiar in this connection, and including Dr. Theiler of the Transvaal. The chief method of combating these diseases appears to lie in waging war against the intermediate host of the protozoa, viz., various flies and ticks. In some cases preventive inoculation is permissible. It was recommended that an International Bureau of Tropical Diseases should be set up consisting of representatives of all countries concerned, and that the Bureau should issue a bulletin giving results of all recent international publications dealing with tropical diseases of animals. In this way much energy could be concentrated.

The second subject discussed was "The Government control of sera and bacterial products and their preparation by the Government." Three papers were presented. The two main points discussed were as to whether the preparation of sera and vaccines should be conducted solely by the State as in Holland, or whether as in Germany and in France, with reference to sera, etc., for human application, the State should exercise control over the agents manufactured by private firms or individuals. After discussion of the various pros and cons the following resolution was unanimously adopted: "In the absence of direct State preparation of bacterial products for use in Veterinary Medicine, the preparation of such products should be placed under the control of the State."

On Friday morning at 9 o'clock the chair was taken by Prof. Perroncito, of Turin, and the first subject discussed was "Avian tuberculosis in its relation to mammalian tuberculosis." Papers were presented by such eminent authorities as Professors Arloing, O. Bang, Möhler, and Washburn, while Perroncito, van Es and others entered into the discussion.

After detailing his numerous experiments and discussing the various points of the question, Arloing sums up as follows:—

(1) Avian tuberculosis is not a special disease, distinct from tuberculosis of mammalia.

(2) Its infectious agent is simply a variation of the bacillus of Koch, with which it is connected by a common primary character, and from which it distinguishes itself only by secondary and moreover inconstant properties.

(3) The avian variety itself is subject to variations like the human and the bovine bacillus.

(4) These variations allow avian bacilli sometimes to vegetate in mammalia, and bacilli of mammalia directly to infect birds.

(5) As to the anatomical pathological character of avian tuberculosis, it causes a special reaction of the tissues of the birds suffering from tubercular inflammation.

(6) The avian bacillus, being simply a variety of the bovine tuberculosis bacillus, in some cases capable of infecting mammalia, it stands to reason that, with regard to avian tuberculosis, the same preventive measures should be applied as are taken against tuberculous meat.

Mr. Oluf Bang sums up with the statement that "There is not sufficient foundation to regard the avian tubercle bacillus as a distinct species. The mammalian tubercle bacillus after a prolonged residence in hens becomes identical with the avian tubercle bacillus. It is difficult to convert the avian form by passing through mammals, yet in a few cases it has been successfully done."

Möhler and Washburn conclude that tubercle bacilli of one species may be transmitted to an animal of another species, or to man, which fact makes it apparent that any preventive methods for controlling tuberculosis to be successful must take into consideration all species of animals that are susceptible to tuberculosis. These investigators also proved that "the eggs of tuberculous poultry may contain bacilli virulent for mammals, and ought to be regarded as dangerous unless cooked." Eventually Arloing's conclusion No. 6 was put to the meeting and unanimously accepted.

The next subject discussed was "Sterility of Cows and its Dependence upon the Infectious Diseases of the Genital Organs." Two papers were presented, and after discussion the following resolutions of Prof. Hess, of Berne, were adopted.

1. There is an intimate relationship between sterility of cows and contagious diseases of the genital organs, particularly vaginitis, and infectious follicular metritis.

2. That it is necessary to establish research stations to determine clinically and experimentally the exact influence of these infectious diseases in the fertility of bovines.

Prof. Hess found that out of 100 cases of barrenness in cows, 58 were due to catarrhal vaginitis. The obvious treatment of course consists of antiseptic irrigations, and where necessary with the addition of dilatation of the os uteri.

On Saturday morning Prof. Arloing, of Paris, occupied the chair, and the first subject discussed was "Government Efforts against Tuberculosis with Regard to the Ways of Infection in this Disease." Papers were presented by Profs. Bang, Dewar, Ostertag, and Dr. Poels. Homage was paid to Bang for the great work he has done in this connection, enabling private enterprise to combat the disease, but it was resolved that control of tuberculosis should be established under central direction in order to get uniformity.

The second subject was on "The Construction of Cowsheds in Relation to Hygiene," and three papers were presented including one by Mr. J. S. Lloyd, of Sheffield. The Dutch system was strongly recommended, and from what I was able to see later at a large model farm, this method has very much to recommend it—no partitions, hands to centre passage, tails tied, deep grips—latter objectionable—short stalls).

In the afternoons of Thursday and Friday the Congress was divided into five sections dealing with various subjects simultaneously. It is quite impossible in this report to take the sections in detail, as I have done the general meetings.

Section I. on Thursday discussed the "Inspection of Fish and Game, etc." (two papers), and also "The Insurance of Stock in Relation to Obligatory Meat Inspection" (three papers). On this point it was decided that "it is desirable that such insurance should be organised by the State in the interests of butchers and agriculturists."

On Friday was discussed "Disinfection of Vehicles of Transport" (two papers), and also "Sero-therapy and Vaccination for Foot-and-Mouth Disease" (five papers.)

Section II. on Thursday afternoon discussed "The Diagnosis of Infectious Diseases by Means of Recently Discovered Reactions of Immunity (except Subcutaneous Injections of Tuberculin and Mallein.") Six papers were presented, and dealt especially with local reactions as ophthalmic and intradermic, agglutination, and fixation of the complement. It would seem that these methods may all be very useful, and especially the ophthalmic reactions. They, however, require further study before being introduced into general practice, and resolutions were passed to that effect.

The second subject was on the "Etiology and Pathogeny of Malignant New Growths." Three papers were presented, the most important undoubtedly being that of Dr. Bashford, who also gave a demonstration of malignant tumours of various animals. He paid a great compliment to the veterinary profession for their work in this connection, referring especially to Jensen, of Copenhagen, and to M'Fadyean. He stated that cancer is neither congenitally nor hereditarily transmitted, and is in no way infective as that word is applied at the present time, and immunity can only be produced by cancerous or normal tissues of the same species or even of the same individual.

On Friday afternoon this section discussed first "Vaccination against Tuberculosis," and six papers were presented on this subject. It is well established that some degree of immunity can be produced by vaccination against tuberculosis, but no method yet introduced is accepted as quite satisfactory. Von Behring's "Bovovaccin" and "Tauruman," of Koch and Schütz, both intravenous injections, fail on account of the short duration of immunity, inability to re-vaccinate, and the danger to the person using them, since they both consist of virulent human tubercle bacilli. The method of Heymans, of Ghent, is well spoken of. By this method the vaccinating organisms of human origin are enclosed in a small reed bag protected by collodion and are inserted subcutaneously. The vaccination can be repeated with safety as often as one wishes. The method of Klimmer, of Dresden, consists of subcutaneous injections of attenuated non-virulent preparations of human bacilli, and can be repeated if necessary. Both Heymans and Klimmer claim to have inoculated 20,000 head without loss, but it remains to be seen what degree of immunity is conferred.

Vallée, of Alfort, is of opinion that serviceable immunity is most likely to be obtained by administration by the mouth of not very virulent human bacilli to young animals. He says that no definite conclusion can be made with respect to the various methods discussed, and that only a systematic application will allow us to decide their proper value.

The second subject was "Pathological Diagnosis of Rabies." Three papers were considered and the conclusion unanimously arrived at is that the presence of Negri bodies in brain substance, as best shown on staining by Van Giesen's method, is diagnostic of rabies, and can be shown in over 90 per cent. of animals affected. In cases where these bodies are demonstrated it is unnecessary to proceed to inoculation.

Section III. met on Thursday under the presidency of Prof. Dewar, and first discussed "Specific Chronic Enteritis of Cattle (Johne's Disease)," on which subject six papers had been prepared. There is considerable divergence of opinion as to whether or not the bacillus of this disease is a variation of the tubercle bacillus. Some think it is the avian bacillus, some that it is bovine bacillus becoming saprophytic, and others, including Bang, M'Fadyean, and Miessner regard it as an entirely different entity, although Mr. Oluf Bang, of Copenhagen, has found affected cows free from ordinary tuberculosis to react to tuberculin made from avian tubercle bacilli. In any case it was recommended that similar steps should be taken against it as against cows affected with open tuberculosis. They should be slaughtered, for undoubtedly the chief means of spread is the dung of affected animals.

The next subject was "Infectious Pleuro-pneumonia of Horses," with four papers.

On Friday this Section discussed "Hæmostasis in the Modern Methods of Castration," seven papers being presented, including one by Professor Macqueen, of London. The various methods were discussed, but no new method was introduced.

The Section then proceeded to discuss "The Pathology and Therapeutics of Streptococcus Infections in the Domestic Animals" (four papers), and differences of opinion were expressed as to the efficacy of antistreptococcic sera.

After this followed a paper on "Chronic Deforming Arthritis of Horses."

Section IV. on Thursday discussed two papers on the "Physiology of milk secretion," and one paper on "The influence of various foods on quality of meat and milk."

On Friday a paper on the prevention of "The prejudicial effects of forced breeding for special purposes," and three papers on "The teaching of Zootechny."

Section V. discussed matters relating to "Tropical and Colonial diseases" as embodied in nine papers, including one by Prof. Gilruth on "The control of animals in health and disease in New Zealand."

The closing session took place on Saturday afternoon and the Minister for Agriculture was again present. The President and His Excellency both offered hearty thanks to all who had assisted in making the Congress such a brilliant success.

It was then decided that the next meeting of the Congress should be held in London in 1914, and telegrams expressing profound respect were sent to the Queen, the Prince Consort, and His Majesty King Edward.

"The Budapest Prize." It was decided to strike a medal to be paid for by funds left over from the Budapest meeting, to be awarded by successive congresses as a recognition for original work, either theoretical or practical, since the last preceding congress.

After very hearty votes of thanks the Congress was declared closed, and the members either returned home or proceeded to see the country under favourable conditions as arranged by the Executive Committee.

Time will not permit me to tell you of my visit to the State Serum Institute at Rotterdam; to the model farm at Oud-Bussum; to the unveiling of the memorial to the late Prof. Thomassen at Utrecht Veterinary School; nor to tell you of my visit to Amsterdam and its abattoirs to see the horses being killed for food; or the most pleasant little trip to the Island of Marken, where the peasants still adhere to their old picturesque costumes.

Gentlemen, I thank you for your very patient hearing. But when you realise that 114 papers were discussed on 24 different subjects, you will realise that a brief report is impossible. The duty you imposed on me has been a heavy one, for strange as it may seem, nearly all the British members became indisposed, and attendance at meetings became real hard labour, and finally it has taken me several whole days to attempt to compile this report in anything like an intelligible manner. I hope I have succeeded and that I have brought you a faithful and instructive account of the proceedings. If so I shall not grudge the work.

The PRESIDENT said it had been a most interesting and exhaustive report that Prof. Wooldridge had given them, and it deserved their best thanks.

Mr. ARCHER had much pleasure in proposing a hearty vote of thanks. The report had been prepared in such a manner that they were able to grasp all the the salient points, and the information it contained ought to be of great use to them in their practices.

Mr. WHITE seconded, and the proposition was at once carried by acclamation, a compliment which Prof. Wooldridge briefly acknowledged.

Mr. PACK proposed that they hold a meeting as usual in London in December, and that it be followed by a dinner to which guests might be invited.

Mr. ARCHER seconded, and the same was carried.

"DISTEMPER."—ADJOURNED DISCUSSION.

The PRESIDENT announced that a telegram had been received from Mr. Stuart, who would have opened the discussion on Mr. G. H. Livesey's paper on Distemper, explaining that he was detained by an important engagement at Lingfield.

He was sure that they all much appreciated Mr. Livesey's paper, in spite of his upsetting a few of their pet theories, for unfortunately most of them had been taught to accept certain views and statements as proven, and their adhesion to early teaching was such that they generally received the current hypotheses without questioning the validity of the evidence upon which they were based. He had much pleasure in inviting discussion on the paper, for he was sure they all knew a little about distemper. In fact most people who kept a dog set themselves up as an authority on it, although few had gone so deeply into the subject as Mr. Livesey had.

Prof. WOOLDRIDGE, in complying with a request from the chair, explained that he had not come prepared to open the discussion. In fact all the time he could spare lately had been devoted to the service of the Society in another direction, and he had not even had time to read the paper through again since he heard it read at the meeting. One thing that struck him when Mr. Livesey read the paper was that although he gave them such a fund of information he said absolutely nothing about the treatment of distemper. The paper was devoted simply to the symptoms and diagnosis of the disease. The importance of that they must all recognise, because the essence of correct treatment of any complaint depended upon a correct diagnosis, and there was perhaps no disease which was so difficult to diagnose in its earlier stages as distemper. It was one of the simplest things in the world to diagnose when it was fairly advanced, but they were then no better off than the ordinary man in the street. What they wanted was to be able to diagnose distemper in its earlier stages, not only to show that their knowledge was superior to that of the ordinary individual who had not made a special study of these things, but also because so much depended upon a proper course of treatment being followed in the earlier stages. Mr. Livesey advised any veterinary surgeon intending to make a speciality of dogs to either keep quite a small hospital and rigidly exclude every case in which there was any room for doubt, or keep a large infirmary and admit all and sundry, but any man who intended establishing a hospital in connection with his veterinary practice, if he did not make special provision for these contagious diseases must at any rate provide some isolation department where he could put cases in which distemper developed after the admission of a patient. He did not wish to suggest that dogs might contract distemper while in a veterinary surgeon's hospital, but an animal might be admitted when the disease was still in the incubative stage, and he did not care how clever a diagnostician a man might be, he could not always foretell in these circumstances that the dog would have distemper. He should say the better plan would be to have an infirmary for only surgical cases, and a smaller hospital for contagious diseases which developed after the patients were admitted.

With regard to the symptoms, Mr. Livesey told them that the earlier symptoms of distemper included a general indisposition, such as the animal going off its feed and possibly vomiting, and that they then almost invariably found skin lesions. He was sure this was a point Mr. Livesey expected him to controvert. He agreed with Mr. Livesey that special attention should be paid to looking for these skin eruptions, and he admitted that he had found these lesions quite early, before the other symptoms were noticeable, but he could not agree that they occurred in practically all cases. He thought some of the other earlier symptoms which he had mentioned frequently occurred in the earlier stages of distemper without there being any skin lesions. Then, again, with regard to the development of these skin lesions he was of opinion that Mr. Livesey had given their course as occurring rather too rapidly. Mr. Livesey said that one might get these pustules run through their full course in from twelve to twenty-four hours, but that was a very short period, and his own experience had been that they usually took very much longer. He quite agreed that there were two entirely different occasions on which these skin lesions might arise—in the earlier stages, and also at a later stage of the disease—and in the cases which had come under his own observation those in the later stages were much more common than those in the earlier stages. He also quite agreed that any dog showing any of these preliminary symptoms ought never to be admitted to any show. He was pleased to say he did not examine for any dog show, and he hoped he never would, for he knew if he did there would probably be a row.

Another very important symptom Mr. Livesey called attention to was the condition of the inside of the ear, and he also agreed with his statements about the mouth being dry and the lips, tongue, and pharynx often ulcerated, but he did not agree with the statement that diarrhœa was always constant. He could not admit for one moment that diarrhœa was always constant in cases of distemper. In the secondary stages it was often present, but the statement that it was always constant, in his opinion went much too far. With regard to the ulceration of the cornea, he had found that very common, especially in short nosed dogs, or rather all those dogs that had prominent eyeballs, but in his opinion this symptom was not so much a specific one as the result of the general debility brought about during distemper. Coming to the latter part of the paper he quite agreed with Mr. Livesey as to the extent of the secondary eruption, and also that the majority of cases where one had an extensive skin eruption went on better than those where it was only in a subdued degree, but he did not think Mr. Livesey's explanation was quite a good one. The only suggestions as to treatment that Mr. Livesey had given them were in his concluding sentences, and they were suggestions that his own experience quite agreed with. It was very unwise when a dog was beginning to feel its feet, so to say, and asked for solid food, to give it any. Far better keep it on liquid nourishment for a while longer and not satisfy its craving for solid food.

Mr. ANGWIN did not agree with Mr. Livesey's condemnation of the practice of "giving something in a bottle." It would never do to tell clients to take their dogs home, and they would probably give them something for it to-morrow. They had better make up some coloured water than turn people away like that. With regard to the skin lesions, he had distinctly noticed them himself, and especially since he had heard Mr. Livesey's paper. There was no doubt his description of them was a very good one, but had he made a careful

microscopical examination of them, and had he discovered whether any great number of them were really skin troubles, or whether the pustules were merely caused through the general unthriftiness of the animal, and dirt having been rubbed into the skin. Personally he considered most of them were due to the latter cause. There was just one remark he should like to make about the use of adrenalin chloride in the treatment of the eye. About a month ago he met a medical gentleman from one of the London Eye Hospitals who told him they had given up the use of it, and he was rather surprised to hear this because he had found great benefit from its use in conjunction with some mild antiseptic.

Mr. LIVESEY: For distemper?

Mr. ANGWIN: Yes. Coupled with zinc sulphide, and boracic solutions he had found the results had been simply marvellous. Asked what strength he usually used, Mr. Angwin replied one in a thousand. Referring to the symptoms of nervous intoxication, he mentioned that he had a very valuable Pekingese the other day that failed with very bad chorea. He could only keep her quiet with the use of narcotics and sedatives, and eventually the animal had to be destroyed. There was no doubt she was suffering from chorea of the brain, and as he afterwards ascertained that she had bred twenty-eight pups in three years, he put it down to nervous exhaustion rather than to distemper, of which she showed none of the ordinary symptoms.

Mr. PACK had nothing new to add to what they had already heard. He quite agreed as to the difficulty of diagnosis, especially in the earlier stages, but if they wanted to find out for certain whether a dog had distemper, take it for a good run. With regard to the treatment, he agreed that the most important thing was good nursing. In fact that was about the only treatment one could adopt with any measure of success. With regard to the pustules of which they had heard so much, he had looked over dogs that had distemper and had found the skin as clean as possible, but in other cases they had been very patent. With regard to the secondary infection, there was no doubt it did occur, and if it was a secondary infection his experience had been that it was generally a much more serious matter than distemper pure and simple. He also agreed that restriction of exercise was very necessary for a long time after the disease had disappeared.

Mr. ARCHER quite agreed with Mr. Livesey in what he had said about the skin lesions, and his opinion was that they were due to the elimination of the virus from the system. He could not say he agreed that this eruption was always present, or if it was he had not been able to always find it. They must also remember that they did not always see the dog in the earlier stages. With regard to treatment he thought they could do a little good. Mild antiseptics were perhaps the best thing. They certainly did not do any harm and they might do a considerable amount of good. He quite agreed that good nursing was most necessary, but they could also do good by giving medicine. The nervous symptoms in his experience were very difficult to combat when once they set in, and with regard to diarrhœa, his experience had been that it was not always constant. It was all very well to suggest that they should not take in dogs that were suffering from distemper, but he was afraid if they always adopted that attitude they would lose a considerable amount of their practice.

Mr. MAYNARD asked Mr. Livesey when he had a case of a dog vomiting, did he seriously mean to say he would not treat that animal medicinally? And what preventive treatment he would adopt, and whether he had found it of any use in his experience.

Mr. LIVESEY: I very carefully avoided that, I think. My paper was simply on the symptoms and diagnosis of the disease.

Mr. MAYNARD: Yes, but the treatment is what we would like to hear discussed. (Laughter.) Proceeding, Mr. Maynard observed with regard to secondary infection, that his opinion was it was not so much a secondary infection as the first having laid dormant in the system.

Mr. PORCH also had one or two questions he wanted to put to Mr. Livesey. He had mentioned the difficulty of diagnosis, and he (the speaker) supposed all veterinary surgeons would agree with him there. He had also given them these pustules as a diagnostic symptom, and he took it that these were the only diagnostic symptom on which they could base an opinion. If they were absent, were they justified in saying a dog had distemper—that was, in the earlier stages? The dog might be dull and off his feed, but might not those conditions or symptoms be indicative of something else? Then with reference to the treatment, supposing a dog had distemper, would not Mr. Livesey treat the symptoms? He would also like to ask Mr. Livesey how he would differentiate between the disease known as Stuttgart disease and distemper?

Mr. LEENEY, who was invited to contribute to the discussion by the President, also made a few observations with regard to the primary eruption. He had, he said, had many conversations with Mr. Gray on this subject, and had been a close observer of dogs with reference to it for some years. At one time he certainly disagreed, and absolutely disbelieved it, but he was now convinced by his careful and constant observations since, that the eruption was to be found in every case. It was very often only a single papule, and it might be where one would easily overlook it. It was also greatly distinguished from the final eruption which preceded recovery, inasmuch as it came up one morning and in thirty hours had broken and disappeared, leaving only a little serosity on the skin which could be rubbed off the next day. In the eruption which came in the final stages, on the other hand, the pustules were very much more numerous, were frequently on the thighs, were a long time in forming, contained a good deal of pus, and when they had broken they left superficial ulcers which took some time to heal.

Mr. LIVESEY, in replying to the discussion, remarked that when he read the paper he expected to be bombarded with questions, because he knew he was going against the opinions of the great majority of veterinary practitioners. The paper was originally prepared for "The Student," and he wrote it more or less in a popular style. Afterwards, when Mr. Smith asked him if he would bring it before that Society, he consented to do so with some reluctance, as he thought it would be better re-written, but he found that as the result of three years further observation he could not alter it in any essential details, and on the advice of one or two friends he agreed to submit it as originally written. Prof. Wooldridge had criticised him for not speaking about the treatment, but his paper was only intended to deal with the symptoms and diagnosis of distemper. It seemed to him that if he had taken the symptoms alone they would have had quite enough material for discussion at one meeting. The diagnosis of the disease also was another important question, and might very well have formed the subject for a second meeting. The question of the treatment he felt less and less competent to tackle, and with regard to preventive treatment he knew practically nothing. The importance of the symptoms and diagnosis of this disease could not be over-estimated, and that was why he had brought them forward first, because until they could get the veterinary profession to come to some unanimous opinion as to what constituted the diagnostic symptoms of distemper, they could scarcely set about tackling the disease in a thorough and scientific manner. Prof. Wooldridge had commented on his remarks with regard to hospitals. He admitted that cases might occur where a dog which was being treated for some other complaint might suddenly show

signs of distemper and land one in rather an awkward predicament, but in his own case he invariably and immediately sent the dog away. The dog would go to another house where it would still be under his supervision and where it would be properly nursed by a competent trained nurse. Prof. Wooldridge also took exception to his statement about the skin lesions being constant, but he thought if he went on looking for them long enough he would find them more frequently, until at last he would find them in every case, that was provided he saw the case early enough. Undoubtedly the secondary rash was more easily seen than the primary one, because only a single papule might be found in the one case, whereas the secondary rash was more diffused and should not escape recognition. Prof. Wooldridge had also dropped on his statement as to the diarrhœa being constant, and here he admitted he was wrong. The paper, as he had said, however, was originally written three years ago and had not been so carefully re-edited as, perhaps, it ought to have been. Diarrhœa was not always constant, but it very often was. They would sometimes get diarrhœa, then constipation, and then diarrhœa again, and both as a rule were very resistant to treatment. With regard to the ulcers on the eye, he thought they often arose because the eye got dry, and in a way it was in the nature of a bed sore; when once the surface was broken and insufficient nourishment went to the part, the part did not tend to heal. They might sometimes be due to the pustular eruption. At all events, that was his explanation.

The first signs of distemper to the casual observer were very often the nervous symptoms, but even at this stage one could very often find this primary rash, and that should lead one to diagnose the convulsions as being due—not to worms, but to the onslaughts of this disease. Mr. Angwin had deprecated his condemnation of the practice of always given medicines, but he did not think that any number of dogs were killed by the administration of medicine, and where veterinary surgeons were not certain as to what medicine they ought to give, if they gave anything, they should prescribe a bottle of coloured water that could not possibly do any harm. The giving of strong medicines was absolutely wrong, both morally and scientifically. To answer another question, he had put the pustules under the microscope and had not been much the wiser, and with regard to the use of adrenalin chloride for atonic ulcers, he thought a solution of 1 in 1000 was too strong. 1 in 10,000 would be equally effective, he should say, but he deprecated the use of adrenalin in distemper. He agreed with Mr. Pack that dogs made very bad convalescents from distemper, and that it was very difficult to say when the disease was actually gone. A dog could not be said to be really free from distemper for, say, a period of six weeks. Certainly when a dog had appeared perfectly well for a fortnight it was not safe to give him a long run, or throw him into the sea, or leave him out at night. Mr. Pack told them he had failed to discover the preliminary pustules, but he thought that was because he too had been unfortunate. A good many failed to detect them because they looked for the actual pusture, whereas if they were to look for the scab or brownish patch on the skin they might very often find it. With regard to the giving of medicines, he thought he had protected himself when he said medicine should not be given unless for some very definite purpose or when it was confidently expected to assist in relieving the symptoms. If they were likely to do the dog good, give them, but do not give them merely as a sop to the client for a big bill. With regard to preventive treatment, they were sometimes asked to vaccinate dogs against distemper, but he always told his clients he would do this if it was their special wish, although he did not think it would do any good; and he did not think he had ever lost a client by adopting this straightforward course, Mr. Porch had asked him whether the pustules only were diagnostic. He had tried to walk round that question in his paper, but his friend had apparently noticed that, and had pressed him for a definite answer (Laughter). He would not like to say they alone were diagnostic of distemper, but he would very nearly go as far as that, because he could not call to mind any other disease where they got exactly similar skin lesions. If they had these skin lesions and had never seen them associated with anything else, he thought they were entitled to associate them with distemper, and in the very early stages he should think they were the only sign of distemper. The only other symptoms taken with the pustules that were diagnostic was the little grey matter in the fleck of the eye, and the irregularity of the bowels, but he would not go further than that. He always made use of medicine where he thought it would do the dog any good, but it wanted to be used judiciously and with caution. Mr. Porch had also asked him how he would differentiate between the diarrhœa of distemper and that of typhus, but he was not satisfied yet that they were not one and the same disease. Typhus was a remarkable disease, and was unlike anything else but distemper, and occasionally it occurred in a way that closely resembled distemper. Further, typhus was a disease that was generally associated with older days while distemper was a disease that attacked young dogs, and it might be that they were simply the manifestation of the same disease occurring at different times. He had brought the paper forward with the idea of concentrating a little more attention on the symptoms and diagnosis of this disease in the hope that when the general consensus of opinion had reached a certain stage they might be able to agree on a satisfactory form of preventive and curative treatment (Applause).

Prof. WOOLDRIDGE proposed a hearty vote of thanks to Mr. Livesey for bringing such an interesting paper before the Society, and making a few further comments upon it with the permission of the President. He remarked that the pustules appeared to him to correspond with the lesions in the foot in foot-and-mouth disease, that was to say they were specific. In fact he would go further, and say he thought they were decidedly diagnostic. With regard to vaccinating, if his clients persisted in it he used ordinary calf lymph, and he had never yet found any ill results. Whether it did any good or not he could not say, but there was this to be said in its favour. Many Continental professors regarded distemper as a form of dog-pox, and if that was so, and the disease ran through exactly similar stages, there was some justification for vaccinating with calf lymph.

Mr. R. PORCH seconded, and the proposition was at once carried by acclamation, and briefly acknowledged by Mr. Livesey.

Mr. ARCHER had also arranged to contribute a paper on "Professional Etiquette," but owing to the lateness of the hour and the fact that several of those present had to leave for their trains, it was decided, on the suggestion of Mr. Della Gana, seconded by Mr. Angwin and supported by Mr. Bloxsome and Prof. Wooldridge, to let this stand over till the next meeting, the Secretary being instructed to give it an early place on the agenda.

Post-mortem specimens were submitted for the inspection of the members by Mr. Bloxsome and Mr. Pack, and the proceedings closed with the passing of the customary votes of thanks to these two gentlemen, and to the President for presiding.

J. ALEX. TODD, *Hon. Sec.*

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A meat trader on your Borough or Town Council, who can talk to everybody, is more likely to be useful to you than three Members of Parliament you may never see or meet in twelve months.—*The Meat Trades' Journal.*

## NORTH OF SCOTLAND VETERINARY MEDICAL SOCIETY.

A Special Meeting was held on Saturday, October 2nd, in the Agricultural Department, Marischal College, Aberdeen, for the purpose of discussing the scheme for the Proposed Reconstruction of the National Veterinary Association and Union of the Societies.

There were present: Messrs. D. Morrison, New Deer (President); Cumming, Culter; McGregor, Old Deer; Watson, Aberchirder; Howard, Nairn; Niven, Kintore; Marsden, Banff; McVean, Craigellachie; Sievwright, Tarland; Skinner, Old Meldrum; McPherson, Huntly; Anderson, Keith; Hepburn, Aberdeen; Howie, Alford (Secretary) and Prof. Gofton, Edinburgh.

Apologies for inability to be present were intimated from Messrs. Peddie, Dundee; Gunn, Beauly; Crabb, New Aberdour; McLauchlan Young and Baxter.

Mr. MORRISON (President) briefly introduced Professor Gofton, who, he said, had very kindly volunteered to come north for the purpose of explaining the scheme as now drafted by the Committee at its recent meeting at Manchester.

Prof. GOFTON provided the members with typed copies of the scheme as drawn up by the Committee, and regretted his inability to let them have copies before the meeting. He went on to say that this was not the first attempt that had been made to bring all the Societies into closer union. When the National Association was first founded its purpose was what they had now in view, but its constitution was not founded on sufficiently wide lines, and possibly it was not at first worked enthusiastically. It had failed to produce that harmony of relationship between Societies which they wished to see. Other attempts had been made, but the present one seemed to have gone further than the others had done, and there were fair reasons for hoping that they might eventually bring it to a successful conclusion. Dr. Bradley recommenced the movement, and one of the reasons which had prompted him was the fact that at present the Societies, as Societies, were isolated. There was no connection between them officially, and they wanted to bring them into closer touch, and form a body by which they could get at the whole of the profession within a comparatively short time. Prof. Gofton said that the Committee hoped that in time it might be possible to establish on a sound footing benevolent and defence funds, and if they did that the existing benevolent and defence societies might be induced to come in. If they got from 1000 to 1500 members of the profession to join them he thought that they would be able to carry these proposals into effect. Unless they could get good and strong support to put them in a sound financial position, their hands would be tied very considerably. He concluded that it was hoped to make the inducements to join so strong that nobody could afford to remain aloof.

The PRESIDENT said that after listening to Prof. Gofton's admirable exposition, he had no doubt whatever that the scheme if carried through promised to be of inestimable benefit to the profession, and he did not think that any veterinary surgeon could afford to be outside the Society. He invited the members to express their minds freely, as further suggestions for improvement of the scheme were earnestly requested by the committee in charge of it.

Mr. HOWIE (Secretary) said his opinion was that the scheme would be of great benefit to every member of the profession provided that every man joined it and stuck loyally to the ranks. He had a strong impression that if it were properly worked—and in such hands as those of Dr. Bradley and Prof. Gofton he was certain it would be—the reconstructed Association would in time be able to do for us what the British Medical Association did for the sister profession. In time it would be a very powerful body, able to fight the battles of the profession before Parliament and elsewhere. He urged every member to join, and put his shoulder to the wheel, and keep it there until the fabric was strong enough to induce the existing Benevolent and Defence Societies to join hands with them. The President and Secretary of the National Defence Benevolent Society were present at the meeting in Manchester, and were very emphatic in saying that they would not think of joining unless the reconstructed body showed itself to be a Society of substance, grit, and enterprise.

Mr. ANDERSON thanked Prof. Gofton for his address, and said that as an Association we should give the scheme our support. The fee he considered would be no objection.

Mr. CUMMING agreed with the rules so far as he had had time to study them, and hoped that the Society would go in for it whole-heartedly. There was one thing he objected to, and that was the word "Medical" in the designation of the Society. He thought that the veterinary profession was strong enough to stand on its own legs without that qualifying word.

Mr. WATSON expressed himself in agreement with the scheme, but would not favour the word "Medical" in the title.

Mr. NIVEN thought the scheme should be heartily supported, but did not agree to the word "Medical."

Mr. HOWARD supported the scheme in a word.

Mr. MCPHERSON said he agreed with the scheme in a general way, but thought the subscription too small for the benefits promised.

Mr. SKINNER would have liked more time to study the subject, but said he was in sympathy with the movement, and would give it his hearty support. He thanked Prof. Gofton for his very lucid explanation of the scheme.

Mr. SIEVWRIGHT, in supporting the scheme, also considered the subscription too small for the benefit conferred.

Mr. MCVEAN in a word supported the scheme.

Mr. MARSDEN thought amalgumation would be advantageous. He would have liked to have heard how it was proposed to dispose of the funds set aside for benevolent purposes. He would be in favour of the new Society drawing up a scale of fees for the guidance of members.

The PRESIDENT proposed a hearty vote of thanks to Prof. Gofton for coming North to explain this new scheme. This was very cordially given.

Prof. GOFTON, in replying, thanked the members for their favourable comments, and hoped that when they had had time to study the draft scheme which he had handed to them, that they would criticise it and send their suggestions to a small committee, which he suggested should be the President and Secretary, who would forward them to him. In answer to a question by Mr. Anderson, he said there were at present 800 to 1000 practitioners members of local veterinary societies in the United Kingdom, but that under the re-constructed Society he hoped that the numbers would be largely increased.

Mr. SKINNER moved, and Mr. MCPHERSON seconded, that "This Society approves of the Scheme for the Re-constitution of the N.V.A. as submitted to-day, and promises its support; further, that a small committee consisting of the President and Secretary be appointed to receive suggestions." This was unanimously carried.

The SECRETARY moved that the Society should contribute towards the expense of preparing the scheme. This was seconded by Mr. SIEVWRIGHT, and unanimously agreed to.

A vote of thanks having been awarded to the President, the members adjourned to the Athenæum Hotel. where they lunched together, and spent a pleasant hour before train times.

GEORGE HOWIE, *Secretary.*

DISEASES OF ANIMALS ACTS 1894 TO 1903, SUMMARY OF RETURNS.

| Period. | Anthrax. | | Foot-and-Mouth Disease. | | Glanders (including Farcy) | | Counties Affected | Sheep Scab. | Swine Fever. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Out-breaks | Ani-mals. | Out-breaks | Ani-mals. | Out-breaks | Ani-mals. | Animals Attacked | Out-breaks | Out-breaks. | Slaugh-tered * |
| GT. BRITAIN. Week ended Oct. 16 | 12 | 13 | | | 5 | 14 | | 1 | 27 | 277 |
| Corresponding week in 1908 ... | 21 | 25 | | | 15 | 46 | | 3 | 29 | 372 |
| Corresponding week in 1907 ... | 14 | 21 | | | 16 | 36 | | 6 | 27 | 149 |
| Corresponding week in 1906 ... | 17 | 17 | | | 20 | 56 | | 5 | 29 | 214 |
| Total for 42 weeks, 1909 ... ... | 1049 | 1378 | | | 446 | 1576 | London 14 | 489 | 1385 | 12447 |
| Corresponding period in 1908 ... | 880 | 1168 | 3 | 112 | 673 | 2084 | | 652 | 1688 | 10332 |
| Corresponding period in 1907 ... | 878 | 1178 | | | 711 | 1620 | | 434 | 2046 | 9679 |
| Corresponding period in 1906 ... | 739 | 1057 | | | 893 | 1677 | | 327 | 936 | 5328 |

Board of Agriculture and Fisheries, Oct. 19, 1909.

| | | | | | | | Parasitic Mange | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| IRELAND. Week ended Oct. 9 | 1 | 1 | ... | ... | ... | ... | ... | 2 | ... | ... |
| Corresponding Week in 1908 ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 200 |
| Corresponding Week in 1907 ... | 1 | 1 | ... | ... | ... | ... | 1 | 1 | 3 | 48 |
| Corresponding Week in 1906 ... | ... | ... | ... | ... | ... | ... | 1 | 7 | ... | 27 |
| Total for 41 weeks, 1909 ... ... | 7 | 7 | ... | ... | ... | ... | 68 | 311 | 86 | 1556 |
| Corresponding period in 1908 ... | 7 | 10 | ... | ... | ... | ... | 34 | 286 | 147 | 3465 |
| Corresponding period in 1907 ... | 3 | 5 | ... | ... | 5 | 9 | 71 | 203 | 129 | 2199 |
| Corresponding period in 1906 ... | 3 | 7 | ... | ... | 6 | 14 | 75 | 180 | 83 | 943 |

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Oct. 13, 1909.

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

## Mr. Trotter's Annual Report.

This official report shows, in the main, that the veterinary surgeon is an ally to the farmer and stock-breeder. Mr. Trotter has had to endure some pretty hard knocks since he took office under the Corporation, but his work is beginning to bear fruit, and if he had done nothing else than pretty well kill the trade in that abomination, boneless box meat, he deserves a monument from the agricultural community. Here he pleads for a uniform system of inspection and standard of adjudication, and sensibly observes that seeing such is in force in other countries there is no reason why it should not be in force here. He pleads for the appointment by Local Government Boards of veterinary surgeons as expert meat inspectors, and in this he should be cordially backed up by the agricultural community.

Coming to details, a great part of the report is taken up with discussion of the dread disease of tuberculosis. The proportion of home cattle found affected during 1908 was 16·51 per cent., as against 16·64 per cent. in the preceding year. Of foreign cattle the number affected in 1908 was only 1·66 per cent., and in 1907 it was 1·48. These figures are certainly not at all complimentary to the home cattle, and no doubt the most will be made of them by those interested in arguing that foreign cattle should be admitted for feeding purposes into this country. But when we look at the tables which indicate the classification of the cattle, the difference between the two kinds is not so marked, although the advantage is still much in favour of the cattle from oversea. In respect of oxen reared at home the proportion of affected animals was in 1906, 5·35 per cent.; in 1907, 5·77 per cent.; and in 1908, 5·59 per cent. The relative percentages for cattle of foreign origin were 1·03, 1·08, and 1·21 per cent. The heaviest percentages of affected cattle are found among cows and bulls, and these are much further advanced in years when slaughtered when of home origin than when imported. Mr. Trotter sensibily remarks that the eradication of tuberculosis would not only be a great gain to public health in securing a more wholesome meat and milk supply, but also to stock-owners in reducing their pecuniary loss. A great point will be gained when stock-owners are unanimous in holding the same opinion, and striving to give it effect.

Farmers will also be at one with Mr. Trotter in desiring the institution of a separate abattoir for fallen animals. Cases of animals affected with anthrax, which have been slaughtered *in extremis*, occur, and at present these have to be dressed in the same abattoir as healthy animals. For such an up-to-date body as the Glasgow Corporation this is surely not as things ought to be.

But the most significant of all passages in this report is that in which Mr. Trotter gives the results of experiments made to test the presence of tubercle bacilli in butter and other secondary products of the cow. These experiments prove conclusively that tubercle bacilli in butter retained their virulence for 133 days. The lesson from such experiments is that "this country should insist upon the supervision of milk cows, dairying operations, and kindred processes of manufacture being carried out as rigorously in the countries of supply as our home authorities intend in future to enforce on herd owners here." This is very much to the purpose. Farmers and farmers' advocates have been preaching this manifestly fair doctrine for many a long day. It is something to be able to claim as an ally the Veterinary Inspector of the immaculate Corporation of the City of Glasgow.—*The Scottish Farmer.*

## Veterinary Inspection at Shows.

The Cawdor Cup Committee of the Glasgow Agricultural Society and the Clydesdale Horse Society have got a step "forrader" with their scheme for the veterinary inspection of all candidates for the Cawdor Cups. This year at the Glasgow Stallion Show and the Highland Show Principal M'Call was the veterinary inspector to whom was entrusted the duty of deciding whether the candidates were up to the standard of soundness or not. It will be remembered that at the Glasgow Stallion Show the Veterinary Inspector felt constrained to "cast" a horse which was owned by a munificent patron of his own, and which was regarded as a likely winner of the Cup had he been passed. The owner was not disposed to "take it lying down," and he offered to get half a dozen Veterinary Professors who would certify the animal as being sound. He also said a few other things which need not be repeated here. A good deal of feeling was generated on the subject, and although things went on all right at the Highland Show—where none of the candidates for the Cawdor Cup were rejected—yet it was desirable that this heated feeling should be allayed. This Committee which was appointed by the two Societies most directly interested have now decided to appoint three veterinary authorities of unquestioned ability and reliability to act as Veterinary Inspectors. These are Mr. A. Robb, F.R.C.V.S., Glasgow, and R. Rutherford, F.R.C.V.S., Edinburgh, with Principal M'Call as referee. In other words, the work of veterinary inspection is to be carried out by Messrs. Robb and Rutherford, and only in the event of their differing in regard to the soundness of any horse is Principal M'Call to be called in to give the final decision. Now, if the "vetting" of horses were an exact science the possibility of any difference arising between two inspectors of wide experience and sound judgment like Messrs. Robb and Rutherford would be so very remote that the Committee might have spared themselves the trouble of electing a referee. But, unfortunately, as every one knows, the "vetting" of horses is not an exact science, but, on the contrary, it leaves ample room for diametrical opposition of sworn opinions, as has been time and again demonstrated in the Law Courts. The system of veterinary inspection at the English shows has produced some grave scandals, and the best friends of the Clydesdale breed have no wish to have any of these scandals at the shows of this country. The judges, if they be competent men, can be trusted to make sure that the animals selected by them for the leading honours are sound in wind and limb. But, on the other hand, if the Societies in question have decided to have the candidates for the Cawdor Cups "vetted" before being adjudicated on, they have selected a bench of Veterinary Inspectors which should command the confidence of studowners in general. As the "casting" of any candidate for a veterinary certificate of soundness has generally the effect of greatly depreciating the animal's value, it is no doubt as well that the responsibility of such depreciation should be divided instead of being all thrown upon one man.—*North British Agriculturist.*

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## A Horse Case.

At the Oxford County Court, James Busby, horse dealer, of Buckingham Road, Bicester, sued William Charles Hodgkins, professional cricketer, of Cowley, for the sum of £14, the amount of a dishonoured cheque presented by the defendant to the plaintiff in respect of a horse transaction at Bicester Fair on August 5th. The cheque was paid by the plaintiff into the bank but payment had been stopped, owing to the death of the mare, in respect to the sale of which the cheque had been paid.

The plaintiff said he had charge of a bunch of horses at Bicester Fair when the defendant approached him and made a bargain in respect to a mare. He received a cheque in payment, but on presenting it at the bank found that payment had been stopped.

The defendant said he attended Bicester Fair with the object of buying a horse. He saw Busby and bought a mare, which was forwarded to Oxford in a horse box. On the way to the station he noticed that she walked very fast, and that she put her head on the ground. He thought she wanted some water, and procured some, but the animal refused to drink. She was conveyed to Oxford, and later to Littlemore, where she became ill and died after being attended to by Mr. Moody, veterinary surgeon, of Oxford.

Henry Sheldon, a blacksmith, of Littlemore, who accompanied the last witness to Bicester Fair, said the plaintiff said at the time of the sale that the mare was a good worker. He noticed that she lacked a tooth, and was sleepy about the eyes. He also noticed her condition on the way to Littlemore. He made her some gruel but she refused to touch it.

William John Moody, veterinary surgeon, of Oxford, said he was called to see the mare. She was in a bad state, and was suffering from inflammation around the abdomen. She got worse. He had made a post-mortem examination and found the small intestine twisted. The mare had been in that condition for at least 24 hours.

His Honour, after hearing the arguments on both sides, gave judgment for the plaintiff with costs. He at the same time sympathized with the defendant in his loss.

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## Canadian Cattle.

*To the Editor of The Times.*

Sir,—The report appearing under the above heading in your columns offers food for reflection on the part of those interested in the cattle and beef trades, as well as to those whose interests are centered in the very large industries connected with the manipulation of the by-products and the manufacture of artificial foods for the production of beef and mutton in this country.

It is admitted that the American Beef Trust has now got such a hold on the meat supplies of this country that not only are the interests of our producers and distributors alike seriously jeopardized, but this country is rapidly reaching the position of being dependent for the major portion of its beef supplies upon an American trust which has demonstrated in the United States the evils to which it can subject consumers. This, I venture to suggest to the Prime Minister, should have far greater weight in his consideration of the arguments put before him by the deputation which he received recently, than the feeble arguments put forward by the representative of the Board of Agriculture in view of the present-day methods of dealing with disease, whether it be in man or beast.

If there is such a terrible risk of importing disease amongst our herds through the medium of Canadian cattle, how is that the Board of Agriculture has allowed cargoes of these cattle for some considerable time to be delivered *via* the Mersey and Manchester Ship Canal at Manchester? Any one acquainted with this trade knows that the boats bringing these cattle pass through what is after all only an exaggerated ditch, having on either side pasture lands maintaining English-fed cattle, and as the hatches are open and the ventilators on the steamers, aided by fans and such like contrivances, are discharging into the atmosphere whatever contagion or infection might be on board, it is only a matter of which way the wind is blowing as to which side of the Canal would be an infected area in the event of the so much dreaded disease being on board these vessels.

Again I would ask. what is done with the manure contained in these vessels on arrival at Manchester? Is it not a fact that it finds its way to the farms in Lancashire, and given that there is disease on board, in what way is the Board of Agriculture protecting the interests of the British cattle feeder? It appears to me that there has existed too long an authority which, instead of endeavouring to discover rational means of preventing diseased cattle from being landed at all in this country, is content to shut the door rather than take the trouble to protect and foster not only the production of the beef requirements of this country at home, but a very large number of industries, including that of the farmer who cannot reasonably count on paying his rent out of any crops that are subject to the devastation wrought by the eccentricities of our British climate. The powers of the Board of Agriculture should be in the hands of up-to-date practical men, and should not be left with those who seem to be so comfortable under a policy of *laisser faire*.—Yours faithfully,

JOHN W. HOPE.

Silvertown, London, E.

In order to finance a veterinary scheme for the county the King's Co. Committee of Agriculture have dropped their agricultural farm prize scheme (£100) and their experimental scheme (£40), and have reduced their show subsidies by £75 (from £150 to £75), and their mare nominations by £10 (from £60 to £50).—*The Farmers' Gazette.*

## ARMY VETERINARY SERVICE.

Extract from *London Gazette*,

WAR OFFICE, WHITEHALL, Oct. 19.

ARMY VETERINARY CORPS.

Capt. Albert C. Wilson. from the temporary Half-pay List, is placed on retired pay. Dated Oct. 4, 1909.

TERRITORIAL FORCE. UNATTACHED LIST.

William James Cade to be Vet.-Lieut. Dated Sept. 17, 1909.

## OBITUARY.

THOMAS HADFIELD, M.R.C.V.S., Wimbledon.
Graduated, Edin : April, 1873.

Mr. Hadfield died on Oct. 17, at 41 St. George's Road from carcinoma of the stomach. His age was 56 years.

Mr. L. G. MEE who had represented Messrs. Willows, Francis, and Co. for many years in the South and West of England, died rather suddenly on Sunday evening last. He was compelled by ill-health to retire from active service about eighteen months ago, but regained sufficient strength to move about again. He was in his fifty-eighth year.

## CORRESPONDENCE.

### CONGENITAL ABSENCE OF MOLARS IN A FOAL.

Sir,

A foal of the Shire breed, six months old, has just come under my notice, with a complete absence of molar teeth. He has done well on the teat, and with the addition of cow's milk, cake dust and millers's offal since, but is quite unable to masticate hay or other long stuff. Although I have never seen such a sport before it may not be a unique case, but I record it for the reason that this animal will probably afford much interest to those who buy him, to the veterinary surgeons who pass him as sound, and to the lawyers who profit by everybody's mistakes. Never to omit the careful examination of the molars at all ages is the moral to be drawn, is it not?—Yours truly,

HAROLD LEENEY.

P.S.—What a chance for the "Horse dentists" to fit him up with dentures!

### ON ABORTION.

Sir,

Having the charge of a large herd of cows into which contagious abortion was introduced last year, for the benefit of your readers I should like to say that the test for abortion, immunisation, cleansing, injection etc. as advised by the Board of Agriculture has now well nigh eradicated the disease, which had become so serious that over ninety out of a herd of between two and three hundred cows had aborted, and those coming in season would not hold the bull.

As regards the test, no doubt most of your readers have had experience with mallein and tuberculin. With this there is a characteristic rise at the ninth to twelfth hour of from three or more degrees accompanied by a well marked systemic reaction in those which have aborted Corrosive sublimate injection twice a week by pellets dissolved in warm water, as supplied by Messrs. Willows, Francis, and followed by immunisation, leaves in my experience nothing to be desired. What seems to keep the disease going is the introduction of fresh cows until the disease is eradicated. I may add that carbolic acid and many other quack remedies were tried before this treatment, but with no success.

GEO. UPTON.

### A WORD OF WARNING.

Sir,

I enclose a cutting from *The Times*. The disinfection of thermometers by veterinary surgeons probably does not receive the attention it deserves. Stockman (*The Veterinary Record*, Aug. 21, 1909, p. 139) has found that the disease known as Contagious vaginitis in cows can be easily spread by the use of the same thermometer, as in tuberculin testing for instance. Contagious vaginitis is a not uncommon disease, and to my own knowledge exists in some of the dairy farms of Essex near London. Some day a veterinary surgeon may have to pay for neglect in this matter, which is my reason for drawing your attention to the fact that the public are of opinion that the non-disinfection of thermometers is neglect on the part of a doctor,—Yours, etc.,

A. S. L.

### QUIS CUSTODIET CUSTODES?

*To the Editor of The Times.*

Sir,—Within the last few months I have had occasion to call in three medical men for my own benefit or for that of members of my family. Two of them were practitioners of some eminence in England, the third a rather famous specialist on the Continent. Each of them made use of a clinical thermometer, taking it from its case, fingering it, inserting it in the customary way in the patient's mouth, leaving it there for the necessary time, and then withdrawing it, and after some further fingering putting it back into its case.

I do not know whether afterwards the thermometer was washed, but I should imagine that this might be difficult to arrange on a round of visits. And, at any rate, the repeated fouling of the inside of the case must nullify the effect of any such tardy purification.

*Quis custodiet custodes?* If we cannot depend upon our doctors to show reasonable regard for cleanliness, we can have but small hope of the security to be afforded by antiseptic precaution.—Yours faithfully,

PATIENT.

Sir,—"Patient" has undoubtedly a grievance against two "eminent practitioners" and a "famous Continental specialist"; but surely a silent rebuke by calling for a glass

of water and washing the thermometer in their presence would have been more effectual than writing to *The Times*. Personally I have for years given up carrying thermometers, making my patients keep their own, as efficient disinfection of the same cannot be carried out excepting in one's own laboratory.—Yours truly,

Aug. 13. AN ORDINARY PHYSICIAN.

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Sir,—It is almost inconceivable that three medical men of "some eminence" or of any other grade could have acted in the manner described by your correspondent "Patient" in to-day's issue of *The Times*.

So far as I am aware the proper cleansing of the clinical thermometer is thoroughly taught and rigidly insisted upon in every modern hospital, and it is not too much to say that, if the neglect of this essential procedure by the three gentlemen in question can be substantiated, they should be drummed out of the ranks of the medical profession.—I am, yours faithfully, E. H. COLBECK.

55 Upper Berkeley Street, Portman Square, W.
August 14.

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## UNQUALIFIED ASSISTANTS.

Sir,

In the current issue of *The Record* I see that the Yorkshire Veterinary Medical Society are up in arms and digging at the unqualified assistant.

As I belong to this category, I would like to point out to the several gentlemen who vetoed us that if they are so very serious to improve the profession they should start at the root of all trouble, *i.e.* cutting of prices, and contracts at starvation figures. They certainly cannot hold us responsible for this, for I see from the same report that the Manchester Corporation pay the enormous sum of fourpence halfpenny per month for everything. No doubt if they made it another penny it would include shoeing. Like the motor, the unqualified man has come to stay, and provided he does not assume to be qualified I fail to see the harm; moreover, he comes in very useful to place the blame upon when anything goes wrong. No one can say they cut the rate of salaries, for masters are pleased to raise them to retain their services, as they take more interest in the work—in fact they have to do so, as they have not the white banner with M.R.C.V.S. emblazoned to hoist as a flag of truce. I know of several who are paid as much as any qualified assistant—and are worth it.

One gentleman whose name you mention has overlooked the fact that he was an unqualified assistant for some considerable period.—Yours truly,

HONI SOIT QUI MAL Y PENSE.

Bristol.

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## MR. UPTON'S QUERIES.

Sir,

To the titular query of Mr. Upton's I think the answer may be given that knowledge has not yet reached finality, and presumably never will until probably some time after the millenium. I can sympathise with him as regards his questions. The enquiring man always wants something plain, straight and unobfuscated.

Proceeding to answer his questions in the order asked:—

1. The dermatocoptes of sheep can live outside the animal body four to six weeks, and in damp and dirty places even longer (up to three months). Eggs may be hatched in three to ten days. The sarcoptes of the horse may live in damp media for about two weeks.

2. Anthrax is generally contracted from spores. The spores may be called the seeds or eggs of the bacilli. When taken in by the animal they are supposed to develop into bacilli in the stomach. The discharges and blood from anthraxed carcases spread infection. Pigs fed on them contract the disease. Foreign feeding stuffs, *e.g.* cotton cake, artificial manures, proximity to hair, wool and hide factories, may all be possible sources of infection by products, water and dust. Spores resist heat and cold longer than bacilli. Some of them have been known to survive steam and live in a dry temperature of 284 F. for three hours.

3. *Cyasthotonum tetracanthum or strongylus tetracanthus*.—Embryos taken up in food or water bore through the cæcum or colon, become encapsuled and then wander back into the intestinal lumen, form a kind of cocoon and later reach sexual maturity in the great colon.

*Strongylus armatus* bores through the intestinal wall, gets into the circulation, and is carried to certain organs and places (often found in the mesenteric arteries). Puddly and swampy places favour the existence of the verminous pest.

4. Fistulous withers has its origin in a fenestrum in the ligament of the neck. Cause generally traumatic due to an ill fitting saddle. Local injury is not necessary to abscess formation internal or external. Port of infection may be remote from abscess itself. In only 2 per cent. out of 145 cases treated by Prof. W. L. Williams, New York State Veterinary College, was there a history of traumatism. Organisms—those of pyæmia and septicæmia (see full report *Veterinary Journal*, September, 1908).

5. The presence or absence of lymphatic vessels and the direction in which they run has something to do with the shape of glanderous knots and swellings. Biting by the affected subject may also alter their form. Shape and size are also governed by the stage of development of the swelling and probably by the amount of support that tissues give it.

6. Roaring is not always due to laryngeal disease. Any obstruction to the free passage of air may cause it. It cannot be too frequently and plainly stated that *disease of the recurrent laryngeal nerve itself or pressure on it, e.g.* from an inflamed bronchial lymphatic gland, *may cause roaring*. A glanders ulcer on the larynx may make a horse roar.

7. Swine fever virus (filtrable and invisible) is assumed to be present in the excreta of infected pigs. There is a good deal of ground for believing this, as also that the virus is very tenacious of life. Affected pigs are not always quickly discerned, consequently the disease is easily spread.

Much of the information given here is obtained from foreign sources. Most of the research that goes on in this country is of a literary nature. The State doesn't acknowledge or generously support scientific research. Workers here have chiefly to take for their consolation and future encouragement a good measure of faith as expressed in the following lines:

"Work thou for pleasure: paint, or sing, or carve
The thing thou lovest, though the body starve.
Who works for glory misses oft the goal;
Who works for money coins his very soul.
Work for the work's sake, then, and it may be
That these things shall be added unto thee."

—Yours faithfully,

G. MAYALL,

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## A QUOTATION.

Sir,

After reading my *Record* on Saturday, I chanced to come across the following quotation in a little French play that I picked up to while away an hour with. I thought it not wholly irrelevant to something I had been reading in your publication. Of course, as Jack Bunsby says: "the bearings of this observation lays in the application on it."

*Le Duc*: Monsieur Moulinet vous parlez trop. Dans notre interêt à tous, soyez, je vous prie, moins expansif.

Yours, etc., W. R. DAVIS.

Enfield.

[Who? What?]

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THE DRUG TREATMENT OF PIROPLASMOSIS IN CATTLE, by G. F. H. NUTTALL, M.D., Ph.D., Sc.D., F.R.S., and S. HADWEN, D.V. Sc. (McGill.)

COMMUNICATIONS AND PAPERS RECEIVED.—Messrs. W. J. Young, G. Upton, G. Mayall, W. R. Davis.

*The Ryhl Journal.*